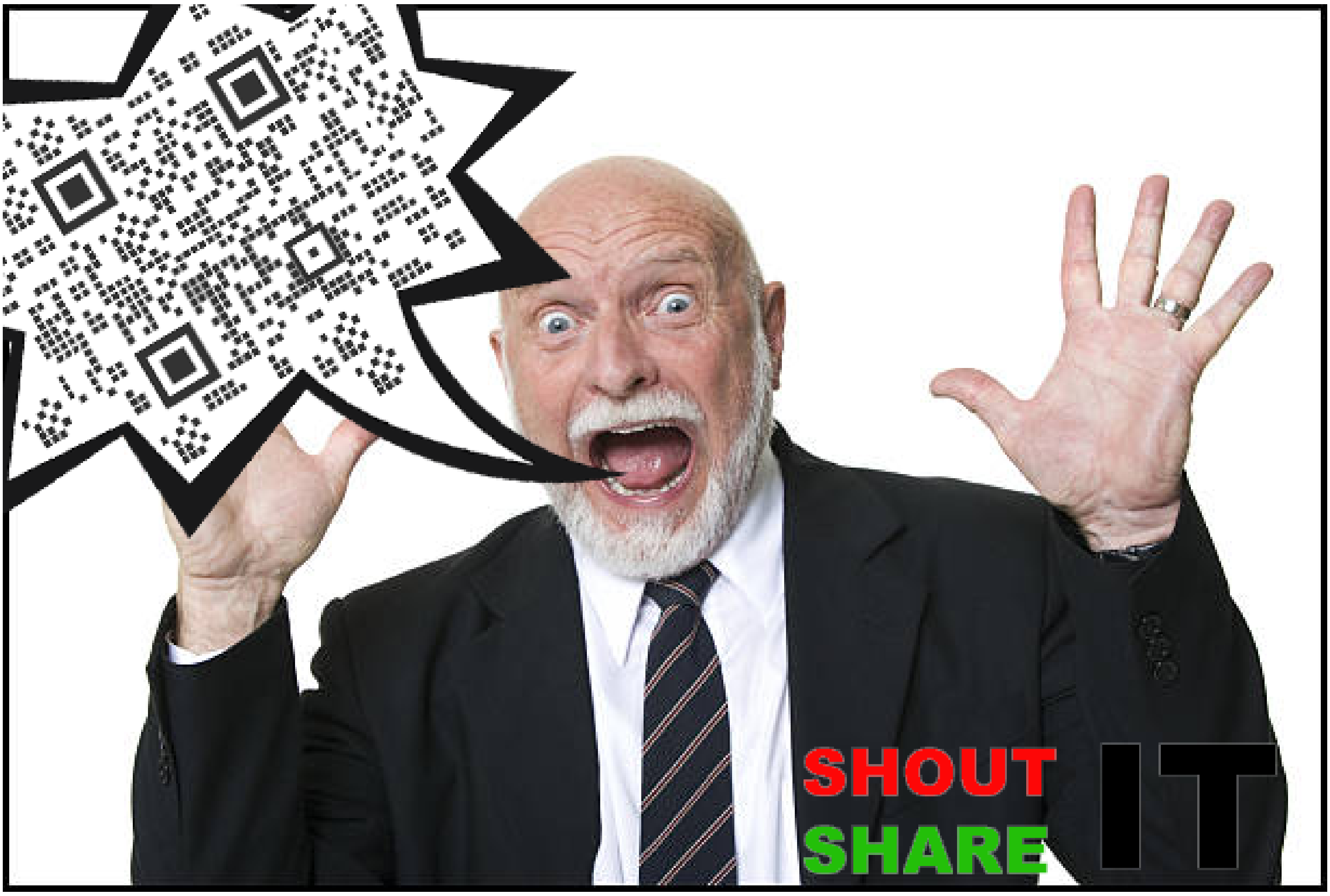
UMASS AMHERST
312066 0287 5324 2

GLEANINGS IN BEE CULTURE

VOLS. 1 & 2. 1873 & 1874.


SHOUT
SHARE
IT

UNIVERSITY OF MASSACHUSETTS
LIBRARY

LIBRARY
UNIVERSITY OF
MASSACHUSETTS
AMHERST, MASS.

F
638.05
G47
v.1-2

"NOVICE'S" Gleanings in Bee Culture.

1873

MASSACHUSETTS AGRICULTURAL COLLEGE.

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED QUARTERLY.

VOL. I. MEDINA, O., JAN. 1, 1873. No. 1.

INTRODUCTORY.

FELLOW NOVICES:—We must confess to a feeling of not being quite as much at home here, just yet, as in the old *American Bee Journal*, but we trust we shall *all*, in time, feel all the liberty here that we have there enjoyed. Remember at all times that Improved Bee Culture is our end and aim, and we trust no one will hesitate to give any facts from experience, because they may tend to overthrow any particular person or "hobby."

If any of *our* especial plans don't work, or if any thing we advertise has had its value over-estimated, here in these pages is the place of all others to set the error right. Please don't be hasty or prematurely positive, and when one of our number acknowledges a fault and makes proper reparation, the matter should be overlooked and friendly feelings renewed on both sides, at once and forever.

The advances now being made in Bee Culture, it seems to us, must necessarily bring about *individual* losses often; for instance, one of us may have made up a quantity of hives for sale, and new developments may point out plainly that they are not fully adapted to the present needs of Bee Culture, and when you are satisfied of this, please do not attempt to sell them without telling your customer the *whole truth*, and making the price correspond. The same may be said of Extractors. If necessary to throw them away as old lumber or old metals, do not, we implore you, hesitate an instant.

Our most successful business men of the present day, have discovered it to be a fact that it is more profitable to tell their customers the *bad points* of their wares as well as the good. There are ample opportunities in this world to acquire a competence *honestly*.

One of the most lamentable wrongs in Bee Culture is the custom of taking money for a "right to make and use" a hive, knowing that the buyer could "make and use" a hive so nearly like it as to answer every purpose, without using a SINGLE ONE OF THE PATENTED FEATURES. It will be our especial aim to fully inform the public of all such transactions coming under our observation.

Please give facts all you can without regard to their bearing on individuals, if they are of such a nature as to benefit the masses. Without further moralizing we will try and let our little JOURNAL show for itself what it is; but, dear readers, we hope you have read this carefully for we may refer to it hereafter.

STARTING AN APIARY.

OUR WAY.

SELECT a piece of ground near your dwelling nearly level, and, if possible, sloping gently to the east or south. It will pay to level it down like a brick yard, removing all rubbish of every description. Stretch a line running east and west on one side, 60 feet long, with knots tied every 3 feet, drive a stake six feet long and 2½ inches square of oak or some durable wood at every other one of these knots; in fact the better way is to tie the knots of black and white tape alternately, fastening them with pins that they may not slip. First drive a stake at each white knot, then move each end of the line by a stick cut accurately 5¼ feet. A line should also be stretched on one of the sides at right-angles to the first so that it may always be shifted squarely forward. Put a row of stakes on the black knots, then on the white again, and you will thus secure them in the shape of the cells in a honey comb, viz: *each stake* is surrounded by six others equally distant. Plant a grape vine on the south side of each stake and a hive on the north side, and with your Bee House located in the center of this plantation you have or may have all the requisites and every facility for moving among the hives in all directions.

This plot will accomodate about 100 hives, which number we consider as many as it will pay to keep for *honey* in one locality. If you are ambitious for more, open other similar “ranches” three miles distant and three miles from each other, (this being the center,) on the plan we have arranged the stakes in the beginning. But as the central apiary of “our system” is not yet finished we will attend to that first.

The very first work to be done is to get those grape vines *growing*, and we know of no variety equal to the Concord for the purpose. Good, strong, well rooted vines should be purchased for about $10.00 per 100. Buy them of some one you know, if possible; never patronize “traveling men.” Pinch off all shoots but one and train that straight up until it is in position to best shade your hive in the hot weather, and tie it securely with strings. Cut down this shoot at the end of the first year and the second year train two straight canes.

In the spring of the third season pull up your stake and drive it 18 inches directly east of its first position, and one just like it the same distance west. Cut them off on a line four feet from the ground and connect the two with strips of pine 1x3 inches, one at the top and another 3 feet lower. Tie your two branches to the lower bar spreading them each way and cut them off beyond the stakes. Stretch wires (galvanized iron is best) from upper to lower bar every 10 inches and your trellis is done. All the pruning and future training these vines will need is to tie the shoots to the wires every summer, and cut them back to the lower bar every winter, pinching off all shoots that are not needed and pinching them all off when they get much above the top bar. We know of no more healthful and prettier work for women and children than training these vines. As they are trained solely for the shade they afford the hives, we have not yet determined what course the Apiarian should pursue should they become loaded with fruit, as ours have been for several seasons, but have an impression that the women and children still might aid us.

Trees have been suggested in place of vines; and basswood would grow rapidly, but we could not have them so near together and they would shade the hives morning and evening when they should have *all the sun possible.* We know of nothing that can be kept just where we want them so well as grape vines, and as the lanes run east and west the sun gives us his rays when wanted and at no other time.

To economize labor we should have the house in the center and the hives and vines thus removed may be placed on the sides so as to make our ranche more in the form of a circle. The north and west sides should be protected from high winds by a close fence or wall 8 feet high.

A track should be laid to the nearest point of access with a wagon, from the bee house door, and a low truck or car used to roll your barrels of honey on, bring in hives, barrels, etc., and every facility afforded for keeping the whole place *neat* and *tidy* at all seasons.

Our friend Mr. E. B. Blakeslee, of this place, uses the following modification of this plan. The bee house is placed at the lowest side of the Apiary and a track or tracks with proper switches made to run between each two rows of hives. A barrel is fixed low down in the car, and Extractor and implements placed over it. The whole is covered with a light, square tent, made of canvass and wire cloth for an assistant to work secure from robbers. Roll your car to the top of the slope, hand the full frames from the hive through a slit in the canvass to your assistant until the hive is finished, then roll your car to the next two hives, and so on until you get to the house, when your barrel should be full and ready to roll off for another. This plan really works well and *ain't patented.* If it suits you, thank Mr. Blakeslee. Next number we will give our plan more fully, and suggestions for the construction of a Bee House.

PROBLEMS

FOR THE GENIUS OF OUR YANKEE BEE KEEPERS.

1ST. Some plan by which coffee sugar can be made into solid candy, as cheaply as we can make it into syrup; so that we can have it in cakes or bars to be laid on top of the frames under the quilt. The most careless bee keeper could then supply destitute colonies with a more wholesome food than honey, and see when they were out by simply raising the quilt. Perhaps our Southern friends could make us some such sugar. If dampened up with water and dried, the “little chaps lug it off” out of the hive when it crumbles down, one grain at a time.

2nd. Is brown sugar any cheaper than No. 1. A. coffee sugar, i. e. in a dollar's worth of each, could a chemist find more *pure sugar* in the cheaper article? If so, about how much? Can our Southern friends help us?

3d. By dispensing with the shaft in the extractor and making the frame larger, we can reverse combs inside of frame. Can they not be reversed *without making frame* larger? If we use folded tin strips instead of wire cloth, they need not come nearer the edge of comb than within one inch of each of its sides. Think of it.

4th. In tall hives in spring the brood cluster has generally to be enlarged downward; in long hives with small frames they are obliged to go over to other combs; while in long hives with long shallow frames they are only obliged to move along horizontally on the same comb, and the latter has uniformly been most successful with us. We should like the opinion of all bee keepers who have no *“rights for sale,”* on the above points. We shall publish the result in a table.

◆

No form of hive which does not provide for, or admit of the ready use of the honey-emptying machine, can ever again find favor with progressive bee keepers.—*Wagner.*

STRAWS.

[For Novice's Gleanings in Bee Culture.]

NOWHERE, Dec. 3, 1872.

MAY I bring a straw for your bundle of gleanings, Mr. Novice? Throw it into your paper basket if you choose. I am among those who do not like to risk having my upper lip made into a miniature portico, or my ability to “observe the beauties of nature” suspended.

W. F. Clark says in “Annals,” “Happy is the bee keeper, who can get possession of an old fashioned, black lace veil.” I think I understand him. With a veil made as follows, no gloves, and a pair of fine tweezers to draw out the little beard that sometimes breaks off in the flesh, as you take away the sting, you may work with very little fear. Three-fourths of a yard of crown lining, black or white as you prefer, three-eighths of a yard of black bobinet lace, (will make the face for two); or tulle is nice, only not as durable, and one-half yard rubber cord. Cut off one width of crown lining 19 inches for length of veil, cut lace lengthwise in two pieces, sew a piece of crown lining at both top and bottom, hem and run rubber cord in top, slip cord over crown of the hat, and tuck the veil under the clothing at the neck, or wear loose. Materials can be found at most milliner's shops or dry goods stores, at a cost of 40c.

N. B.—If you have any very prominent features, don't draw the veil too closely. **0.**

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Quarterly, at Medina, Ohio.

Terms: 25c. for the 4 Numbers.
Any one sending us 5 Subscribers can retain 25c. for their trouble.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, January 1, 1873.

As we are only a "wee" Journal as yet, many things are crowded out that we should have been glad to have used.

◆

MESSRS. SHAW & DANIELS, whose advertisement appears on last page, are men to whom we should not hesitate to send an order if we wanted Bees.

◆

OUR readers will oblige us by calling the attention of their Bee keeping friends to this our first number "Gleanings," *if they think it worthy of it*, but don't otherwise.

◆

WE have received queens from both Mr. Argo, of Lowell, Ky., and Mr. Carey, Colerain, Mass., too late to judge of them, as with us a queen is estimated by her work, and "handsome is as handsome does." We hope the gentlemen will accept our thanks all the same.

◆

WE have no "Associate Editors," and are only a plain, simple "Novice," yet we are going to try hard to earn the many "25 cents-*es*" which have been sent in so freely; and the many kind letters of regard and approval of our past efforts in the *American Bee Journal* we have no room to notice further than that they are worth more to us than "coined gold." Our heartfelt thanks to you, one and all.

WE shall, if a sufficient number desire, describe our machinery for making hives, windmill, buzz saw, etc., etc. Several have made inquiries already, and those caring for the matter will please drop us a line. We recommend every Bee keeper to make his own hives if possible.

◆

THANKS.—"0" from "*nowhere*," you have given us something far superior to "covered wagons" with sleeves, strings, and wire cloth, so often recommended and which are in hot weather a greater punishment than stings. The veil we used when handling *closed top frames* was brief enough to be carried in the vest pocket and yet protected the face perfectly. We think very many could make, burning rotten wood, a sufficient "argument in all emergencies" if "they only thought so."

◆

A CORRESPONDENT who rears queens for sale writes us that some of his neighbors are stocking up with black bees, which they will neither sell nor *pay half price* for having Italianized, thinking he will do it for nothing rather than suffer so much damage from hosts of common drones. As these persons are *of course* ignorant and unskillful, he suggests the probability that their bees *may* all die during the coming winter. We are inclined to think kindness, forbearance and a friendly disposition to try and make better neighbors of these people, will, as with all other neighborhood difficulties, be found the most powerful weapons in the end.

◆

BY "fixed" frames we understand such as are not movable *laterally*, but have a permanent position assigned to them, which the bees commonly make more *fixed* still by means of propolis. To adopt and use such is to go half way back to the old box system. On that principle railroad men should abandon *steam* and run their locomotives by *horse power!*—*J. M. Price, in American Bee Journal.*

HEADS OF GRAIN FROM DIFFERENT FIELDS.

QUESTIONS AND ANSWERS.

SEND me all the information you can on bees, as they have been my study for 30 years. I have fed two bbls. A crushed and one bbl. coffee sugar; I wish to know best preparation, and which sugar is best, and the sort of bee house you recommend. I find that strong colonies will do well anywhere and weak ones do best in the house. I used one gill of vinegar to 25 lbs. sugar, and 2½ gallons water, boil and skim. Will that candy if not used up before spring? J. HARRIS, Montville, W. Va.

ANSWERS.—We have used the recipe as given in our circular, for the past 6 years, more or less, with uniform success; and a friend near us has this fall fed a bbl. of coffee sugar by simply pouring boiling water on it, and *nothing more.* The bees have sealed up the greater part of it, and all is well so far. Will report further in spring. We have no doubt your recipe will be all right, if fed early enough, but why so much water? Full directions will be given in our next, for building for winter, to be used as honey houses in summer. We think there can be no danger of candying, but your syrup may sour if fed too late to be sealed up. (See problems.)

IN answer to Mr. Eli Coble, Cornersville, Tenn., we reply that R. R. Murphey's extractor comes nearer to what is wanted than any we know of. Have them made to take the frames the largest way up and down, and have the can as small as can be and revolve the combs not more than 10 inches from each other, and have him leave off all the wood work, so that it can be fixed over the bung of a barrel. (See problems.)

G. E. CORBIN, St. Johns, Mich., asks: "Is not 9⅛ inch frame too shallow to economize heat to the best advantage in wintering, and for spring brood rearing?" Our experience is most strongly in favor of shallow frames for the very reason you mentioned. See *American Bee Journal*, page 104, Vol. VI, and page 274, June, '72, and problems.

"Do you use any honey board?"—Never except the cloth quilt. "Are not frames 18x6 inches or thereabouts, of on awkward shape to use in extractors?"—Quite the contrary, see a former question. "Do you place the boxes at the side or on top of frames?" For box honey make the dollar hive we have recommended in our circular, of double the width and put on a second story. Now put the bees on ten combs placed in the center below, and put your boxes on each side and above *a la* Quinby's hive. If you can raise bees enough, all the boxes will be filled probably, but you would certainly get more honey to let the bees fill frames if room be given them gradually as they can use it, and then when you get nice combs in all 40 frames, it seems such a waste to destroy them that *we* should advise taking out the honey with the extractor, and returning them to be filled again; which will be done in one-fourth the time it would take to build new ones. Such a hive should be made for about one-half more expense than $1.00 hives, and affords every facility for working frames spread out horizontally, or for getting enormous yields of box honey with powerful colonies, or those made so by taking brood from other stocks.

"WILL not extracted honey soon become unsalable, or at least at a paying price? It is certainly much thinner, watery, more liable to ferment in quantities, etc., etc., and I notice that while it is quoted at 13c, it is claimed that box honey sells as high as 30, 40, and sometimes 50c."

Do not extract the honey until the bees begin sealing it, and it will be precisely like that in the comb. Whenever you can distinguish any difference in taste, it indicates that the honey has not been fully ripened in the hive. Small quantities that have been extracted too soon, may be ripened by placing in shallow pans in an oven. No Apiarian should make the blunder more than once. Extracted honey, too, retails in some places for 30 or 40c. (See honey page).

"AM I to understand that any swarm of bees will take up and deposit 25 lbs. of syrup in ten hours?" Many report that they do not, but ours do even better when we have a full colony of Italians, weather warm, and *syrup warm*, and feeder on *the frames* directly over the cluster.

"WHEN you have a colony large enough to need two or three stories in the summer, do you force them all into one to winter?" Sometimes, but they have required more food, and were no better in spring than those with fewer bees, and now we take brood from them after the working season, for others that may need it, or to make new colonies.

HENRY PALMER, of Hart, Michigan, writes: "That swarm that had given us 400 lbs. when I wrote you, have since given us 100 lbs. fall honey, making a good 500 in all. Our surplus will not come much, if any, short of 3000 from 11 swarms, no increase of swarms." As Mr. Palmer has given us one of the best reports ever made in bee culture, will he be so kind as to describe his hive and mode of working. He adds further:

"How do you keep the bees from gluing the upper and lower stories together, also, lower story and bottom so that you cannot move the hive forward and back to enlarge and contract entrance. My bees glue them so it is almost impossible to separate them, and how do you lift off the upper story without strips and cleats around the hive?"

Mr. Palmer, we declare, we will put you in the problem department. Geo. Howe, M. D., away down in Louisiana, wrote us a pleasant letter last May, and in it remarked that a cloth dipped in warm, clean tallow and passed over those parts of the hive that he wished kept free from propolis, would, so far as his experience went, answer the purpose completely. We are almost ashamed to say we have not given it a trial, but in this dilemma make the suggestion. We would contrive some way to avoid having projecting strips on the hive if possible. Some machine could be made to cut a place for the fingers in the end boards of the hive, without cutting through. Thanks Mr. Palmer for just criticisms.

Mr. J. F. Row, Petersburg, Mich., wishes to know if our "top bars do not sag when the frames are full of honey." None to speak of, even when supporting heavy glass vases filled with honey besides. The thin comb guide, when glued in place by the bees, gives great strength with little weight.

Prof. A. J. Cook, of Agricultural Colledge, Mich., reports $80.00 profits from a single hive this season. "Never say die," (as 'Barnaby's Raven' had it,) friend Cook, if the Bee Cholera did use your bees shabbily.

PERIODICALS OF OUR COUNTRY DEVOTED TO BEE CULTURE.

We think most of our readers will agree that the *Am. Bee Journal*, published ed at Washington, richly deserves to stand at the head of the list. It is now in its eighth Volume, and having steadily kept the good of the people in view, it could hardly be other than of the greatest value to the Apiarian. We would most strongly urge beginners, to get the complete back numbers and have them bound for reference. There is scarcely a disputed point in the whole science, that has not been considered at length, and *pros* and *cons* given from practical experience of the leading bee keepers of the world. Terms $2.00 per year.

The *Bee Keeper's Journal* made its appearance in 1869, and has given us much that is valuable. It has a neat and attractive appearance, and makes a pretty family paper, were it not necessarily cramped and made in many respects unreliable, from the fact of its being owned and published in the interest of a patent hive. As a free discussion of different forms and shapes of hives might not always favor the one that *must not be criticised*, every thing relating to hives is ommited or changed so as to refer only to *the* hive in question. As the paper has been largely advertised and has a great circulation, it is to be earnestly hoped that this objectionable feature may soon be removed. Issued monthly, at No. 14, Murray St., N. Y. Terms, $1.50 per year.

The *Illustrated Bee Journal*, afterwards changed to the *National*, published monthly *sometimes*, and sometimes oftener, we believe was never considered of much value. The proprietor owned two patent hives, and it finally fell into the hands of the editor of the *Bee Keeper's Journal*, before mentioned, who may have owned it all the time, we don't know. The *Journal* at one time made each subscriber offers of queens for premiums, that have never been sent, and, although possessing some valuable features and some articles of merit, we cannot conscientiously recommend it. Published at Indianapolis. Terms, $2.00 per year.

Moon's Journal, started recently, we would designate the *North American Bee Journal*, were it not for the fact that we so much dislike copying the name of an old established *Journal* so nearly. Are there not names enough in the world to furnish a greater variety and prevent confusion.

We have many times asked a visitor if he or she took the *American Bee Journal?* "Oh, yes, certainly," and then after a while finding they seemed to know nothing of the existence of more than *one path* in bee culture; we asked again, where is your *Journal* printed? "In New York, of course." And they had subscribed for the *American Bee Journal*, not knowing that there was another on the face of the earth. Pretty soon we shall have to designate them as the "Indianapolis," "New York," and "Washington" *Journals*. Please, Mr. Moon, call it something else. Candor compels us to say that the greatest fault we can find with this *Journal* is, that it seems to lack both substance and system. Indianapolis. Terms, $2.00 per year.

We feel that we should here mention the *American Bee Gazette*, started almost simultaneously with the American Bee Journal, and afterwards united with it. A little paper started and carried forward on the right principles; and we cannot help, even now, thanking Mr. E. VanSlyke, for the first ideas given us then of the melextractor.

Annals of Bee Culture has been issued for the past few years, and contains much that is valuable, but candor compels us to say again, at the risk too, of having it said that we are incapable of seeing any thing of value any where, except in the Old American Bee Journal, that the great progess made in apiculture each year, has not been presented in such shape as to be of most value to the masses.

"Last and least," "*Novice's Gleanings*" has the audacity to peep into existence, and opens up by pitching into everybody right and left. Beware! beware! Novice. 'Tis easy enough to find fault with others, but how do you know you can do even half as well as the least of them? Well, perhaps we shall not, but we are now in the crucible, and if the fiery ordeal leaves nothing remaining of us of any value, we will try and bow our head in submission and stop when we have fullfilled our promise of giving "four numbers," the very best that "ever we can."

BOOKS OF AMERICA DEVOTED TO BEE CULTURE.

EVERY bee keeper should read *Langstroth and Quinby.* No matter who, or where, or what your proficiency, read them for it will afford you a rare pleasure that you cannot afford to lose.

For something for ready reference, condensed and alphabetically arranged, we know of nothing better than Mr. King's *Text Book.* It served us well and we almost learned it by heart, (and we must add the American hive along with it, which we could have far better dispensed with, and hope Mr. King will too, when he ceases to be a patent right man,) and have given it to many beginners to save answering their innumerable questions. It is true that no mention is as yet made of the extractor in any of its frequent revisions; nor have we any work, so far as we know, that even does it any kind of justice. Perhaps our many periodicals are fully competent for this work. Price of Text Book 40c, and it is well worth the money after tearing out all about the "American hive," "Instructions to agents," etc.

Bee Keeper's Guide, by E. Kretchmer, Coburg, Iowa. Price 50 cts., has just been sent us for an opinion. As our opinion has been asked, we can afford to be quite candid. The whole appearance of the book struck us as something strangely familiar, and on reading different parts of it, we were still more puzzled until we placed King's Text Book by its side, and found that the same ideas followed in almost the same succession even to whole pages and chapters; and *extracts* were in the same words; even "American Hives," too, (under a different name.) "Instructions to agents, etc." Has Mr. Kretchmer stolen this from King, or has King sold him the right to,—to copy him. imperfections and all? As the book is larger than King's there must be something new, and we find the Extractor mentioned favorably. but it is so unimportant an implement that we presume more than one page devoted to it would be a waste of time.

Can't some one who makes a business of selling only Bees and Honey write a Text Book, with no other end in view than to teach us to produce honey cheaply.

"*Bees, Their Management and Culture,*" by Mrs. E. S. Tupper, we can heartily recommend. It advocates movable comb hives, only in the abstract and not any particular one. The work is too brief to go into details, but many valuable facts are given. As Mrs. Tupper devotes a page or two to box honey, and not quite five lines to the Extractor, we shall have to think that she is unacquainted with developments made in bee culture in that direction, or hesitates to recommend it to beginners. The *assertion* on page 12 that "The most valuable invention since movable combs, is that of the new swarming attachment," of Mrs. Farnham's, *we think* very doubtful. for very many large Apiaries are now managed with the aid of the Extractor, so that swarming is almost, if not *quite*, done away with. and such an arrangement would be worse than useless for *that* purpose. As no mention is made of the malady that has carried off large Apiaries during the past winter, we must conclude she has no advice to offer on the subject, or that "ventilation," "plenty of food," and "numbers" furnish the remedy. We leave the question to be answered by those who have suffered.

Some of the circulars that we receive from enterprising Apiarians, are almost a Text Book in themselves. Quinby's circular and price list we always look for with pleasure, as we do many others.

Queen-Rearing is really getting to be one of the fine arts, and we know of no more honorable occupation for man or woman. The same can be said of the manufacture and sale of hives and all implements of value in apiculture. where the curse of patent right speculation and false representation is not connected therewith.

◆

RECOLLECT that you must keep the animal heat concentrated in a compass small enough to suit the quantity of bees. and you are all right. If you hurry too much you spoil the whole.—*Gallup.*

HONEY COLUMN.

THE sole end and aim of bee keeping is honey, or rather it should be if not directly, indirectly. We may sell bees, queens, or hives, but only that their possessor may secure honey thereby. It has been said that only 10c. has been offered for honey in the West, and yet in a brisk little railroad town in Ohio, they retail extracted honey at 45 cts. and comb honey 50 cts. Now, can't those bee keepers West have a little more, and the good people of Xenia be supplied at a little less figure? We are going to try and get the two opposite factions acquainted and help them both, if we can. We have done but little yet, but here is the result.

Messrs. Barber & Stout, No. 16, Main St., Cincinnati, will pay 13½ cts. cash, for 20,000 lbs., delivered in their city in securely waxed barrels. Barrels to be returned in good order when emptied.

Mr. W. H. Shane, Chatham Center, Medina Co., O., has 235 lbs. candied basswood honey, that he will sell for 20c.

Mr. J. Pratt, Mallet Creek, Medina Co., O., has 1000 lbs nice extracted honey which he offers at 18c.

If any one has honey they will sell less than the latter price, we will publish it in our next gratis; and if any one will pay more than Messrs. Barber & Stout, we will also publish their offer. Don't write to us, but write to the parties mentioned; and we would suggest that samples of honey may be sent cheaply by mail, in small tin boxes, such as watch movements come in; to be had of any jeweler. Make the joint tight with melted wax. Good honey, we believe, is always candied at this season of the year, or should be, at least, and it is easily shipped in this state, and will keep good any number of years, so that the Grocers need be in no fear of losses in that direction. If some one dealer in every town would advertise good honey for sale the year round, could all of our bee keepers supply the demand, even if retailed at 25c?

BEE STINGS.

WE really must decline to publish any of the thousand and one remedies for bee stings sent us until we have more conclusive evidence that *any thing* is of any avail. In the majority of instances the pain ceases in a few minutes whether any application be made or not, and when a remedy be applied it generally receives the credit if relief follows, if not, something used in a former case receives the preference. We say, extract the sting in such a manner (with the point of a pen knife for instance,) as to avoid pressing the contents of the poison bag into the wound, and then let it alone. Any irritation, such as rubbing the affected part, produces pain and swelling, so we repeat, "*let it alone*," and get your mind on something else as speedily as possible, and all will be well.

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

ITALIAN QUEEN BEES FOR 1873—Will be bred from Imported Mothers, one of which is one of Charles Dadant's importation. Persons who purchase Queens of me will get what they bargain for. Send for circular.

WM. W. CARY.

COLERAIN, Franklin Co., Mass.

R. M. ARGO, IMPORTER and BREEDER of Pure Italian Queen Bees, I would say to my friends and customers, that if I am fortunate in getting my bees safely through the present winter—as I generally have been, heretofore—I will have for sale, early in the spring, about twenty-five colonies with choice queens. I also expect to have a few queen breeders to spare in April. Having the advantage of a more southern location, I can furnish queens earlier in the season than Northern breeders. All communications promptly answered. Please enclose a three cent stamp for letter. Circulars sent free. Address, Lowell, Garrard Co. Ky.

PRICE LIST OF PURE ITALIAN Queens and Bees from Shaw & Daniel's Apiaries, for 1873:

For last year's Queens, sent as early as the weather is suitable, $5 each.

Tested Queens, during the season, $4 each.

Untested Queens in June and July, $3 each. After the 1st of August, $1.50. All Queens sent by mail warranted pure and fertile. Safe arrival guaranteed.

Nucleus' Hives containing pure Queen, with 6 frames each, 8½ by 9½, $8 each. Can be built up into strong swarms or used for wintering surplus Queens.

Full coloneis in one story Langstroth Hives, ten frames each, $13. Wide hives with movable partition board from 14 to 17 frames each, $15. Two story hives containing 21 frames, $15 each

American Hives, containing 9 frames with space between top bars, $15 each.

Each colony will contain a young Queen and 9 frames of comb, with extra frames. Sent by express and safe arrival guaranteed. Address

J. SHAW & SON, Chatham Center,
or J. E. DANIELS, Lodi, Medina, Co., O.

"NOVICE'S" Gleanings IN Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

Vol. I. MEDINA, O., FEB. 1, 1873. No. 2.

STARTING AN APIARY.

No. 2.

WE hope our readers will recognize the fact that we can here only give general directions for the mass of those who wish to commence bee-keeping

From a host of letters on the subject we pick up the following:—

"What must a poor fellow do who has not the land lying to the east or south convenient, neither the means to improve it in the way that you recommend, but would still like to keep a few stands of bees.

"One of my neighbors on reading your description of your grounds, exclaimed, 'Oh! yes, Novice has plenty of money and I have none, and my wife in the doctor's hands.' "

Bless your hearts, fellow novices, we have not advised anything *expensive*.

Take such land as you have got, or if none, we must advise every bee-keeper to get a few rods of land some way, "all his own."

Commence small and *don't run in debt*. Those who commence with nothing but their "bare hands" are oftenest the most useful and most successful people we have in the world.

With an axe and spade and round poles from the woods even, you can do all that we have advised Start on the plan we gave if it be only for a half dozen hives, and they will increase as you gain practice and experience.

Twelve years ago Novice had not the value of $10 in all his "earthly possessions," and had not money been absolutely necessary for the working out of some of his experiments he might not now have been able to publish even a 25c. paper. Mrs. "Novice" and the children will tell you that "plenty of money" was never yet known in their household, but that twelve or fourteen hours of work daily, always has been and we trust always will be; and most of it is a pleasure too, especially that part pertaining to the grape vines, and they can be raised in any quantity from cuttings pruned from old vines at *no expense* but a very little labor.

Tell your neighbor to take his wife out doors with him, to help plan and arrange his apiary, keep her on *fresh beef steak* "roasted on the coals," and perhaps no doctor will be needed.

If more of our American women *were* bee-keepers they would know better what health and happiness *is possible* for them in this world of ours.

Now then, fellow bee-keepers all over this broad land, whether you have one hive or hundreds, get your grape vines growing and then see about hives for the bees that are coming bye and bye, and please *do* have those hives all alike, so that any frame will go nicely into any one of them, or "any part any where."

This is easy to say but so hard to accomplish that we fear you will many of you never do it unless you commence work *very carefully*.

Some kind of a buzz saw seems a positive necessity, and here again we say, do not get in debt for something you cannot afford.

If you wish to make but few hives a circular saw,costing not much over a dollar,made to "rip" and "cut off" both, will do very well. The teeth should be fine and size not over seven or eight inches: smoother work can be secured by having two such saws, one to "cut off" and one to "rip."

A home-made arbor to run them on can be made without much expense, but a self-centering and self-oiling arbor can be purchased for $12 or $14, and are much more convenient. Ours came from Wilkinson & Co., No. 2 Washington street, Boston, but we think they might be purchased of any saw-maker near you.

Our table is home-made; top hinged at *one* end and the other is raised and lowered by a sett screw, so that any kind of rabbeting is quickly and accurately done. Top of table is 3x4½ feet, of ash, screwed together very firmly.

As we use the same table for "cutting off," the bar of wood that lies parallel to the saw, to gauge the width, was in the way and was troublesome to remove. This we now have attached to a strip hinged to the back edge of the table so that the whole turns over back and below the surface of the table entirely out of the way when we desire to "cut off" boards.

If you will all now "listen hard" we will try and describe a little arrangement that gives us most pleasure of anything about the "masheen."

Boards must be cut *square in two* and to do this they must have one edge cut nearer straight than we buy them. We quarreled a long while with our mechanics about it and now do it *our way* with great satisfaction.

About six inches in front of the saw cut out a strip of the table lengthwise, three or four inches wide, and fit a piece of hard wood to slide *easily* but *closely* in the groove, its top being level with the top of the table. Screw a similar piece across this at right angles, resting on the bench and reaching up to the saw, and of about two feet in length. This piece must be so nicely adjusted that a board held hard against it will be cut exactly square off.

To cut pieces of frames on a square mitre we must have another strip fastened at an angle of forty-five degrees to the first piece, and to keep both of these firm, their ends furthest from the saw can be screwed together, making a complete figure 4, the upright part of the figure being the one that slides in the top of the table, the horizontal bar cuts stuff square off, and the slanting one is to cut pieces beveling or so their ends go together like a picture frame.

"Stops" are made on both pieces at the proper places to cut off work. For instance, the square bar has a stop to cut the length of side of the hive, end of the hive, and cover of the hive. Slanting bar has stops for top for bottom of frame and end of frame. Now it is a *very nice* point to set these "stops" just right, and when they are set we don't want to move them, but they would interfere with each other if stationary so we have them made of a strip of brass with one end turned square so that it will spring out and make a secure stop for the end of the board, yet may be pressed in a mortise out of the way when we wish to use the stops beyond it. So you see we can make a hive complete as fast as we can handle the stuff, all exactly right, and "nary a square or rule" do we have to bother with.

But, observe, cut off your pine boards (dressed on both sides accurately to seven-eighths) first into lengths for one end and one side and *a little more*. Now straighten one edge by setting it down firmly on some small points projecting out of the sliding strip so that your saw will just trim one edge.

When this trimmed edge is placed against the square strip you can cut the piece in two so that you have one square end on each. Place the square end against the proper stop, and your piece has *three* sides true. *We* bring it to the proper width and leave the edge of the proper bevel to make the joint (between the cover and hive or upper and lower story) shed rain, at one operation by elevating the finished edge on a wedge shaped platform supported on those same points in the sliding strip as it is moved against the saw. The pieces that come off make the frame that holds the cover from warping.

So you see a piece of board thirteen inches wide, and about six and a quarter feet long makes our dollar hive complete except cover, which is 20½x16.

The rabbeting in the end pieces should be done just before the strips for cover are sawed off.

In answer to many inquiries we would state that after careful experiments last season we preferred the space between end of frames to be not less than three-eigths and not more than one-half inch. A distance of one-fourth inch can be used but much greater care is required in handling combs to prevent squeezing our young friends that "want to know" what we are trying to do with them.

To those who claim that bits of comb will be built in one-half inch space we reply that it's your business to see that they have better employment.

Keep the honey out of their way and give them one frame to build comb in, during the comb-building season. You will *never* get too many nice combs for they will sell even now, especially if we adopt some fixed dimensions for our frames so they will fit our neighbors' hives as well.

Again, *keep the honey out of their way* as faithfully as you milk your cows daily, and we had far rather remove all the honey from a hive than milk a cow. Cows require milking about six times as often and don't give honey either, and—"bless our stars," if we run on this way it will take a *weekly* paper instead of a *monthly even*, to enable us to tell you how simple a matter it is to save the floods of honey that bountiful nature pours down at our very doors, and everybody seems to be afraid to even give the "little chaps" a place to put it conveniently, "'cause they'll sting." Now we are afraid our friends will have to run their buzz saws *by foot power* until next month; it is cheaper and is healthy exercise and gives one an elastic feeling about the walking apparatus afterward, and so we'll tell about the windmill next month.

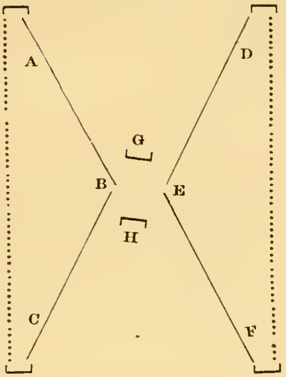
* * *

HOW TO MAKE A HONEY EXTRACTOR AT AN EXPENSE, OF, NOT EXCEEDING $5.00, AND PRATICALLY SUPERIOR TO ANY NOW OFFERED FOR SALE SO FAR AS WE KNOW.

AS our machine, kind friends, is to be made all of metal, and, like the dollar hive, is to be useful only and not ornamental, it is important that the roofing tin plate, of which it is to be made, be purchased at a small margin above what it costs by the box. About ten sheets 14x20 will be required, and your tinsmith should not charge you more than 15c. each, as they cost at present only $14.50 per box of 112 sheets.

The only difficulty of the work is the revolving frame inside the can, and to make it clear we employ the following illustration, which is supposed to represent the frame as viewed from above before the arm supporting the gearing is placed on one side of the top of the can.

FIG. 1.



A,B,C and D,E, F are each sheets of tin cut off to 16½ inches allowing 6 inches from center to first corner, and 2 inches each for spaces at A, C, F and D, and ¼ inch turned at right angles to hold the wire cloth or metal bars represented by the dotted lines. G and H are strips 14 inches long (same as width of sheets A, B, C and D. E. F,) and ½ inch broad, bent lengthwise so as to form grooved pieces that, when soldered in place, hold the two large sheets in place and leave room to drive a ¼ inch steel rod in center for shaft, or simply a pivot pushed in a couple of inches at each end and soldered will answer. Two pieces of Stubbs' steel rod, ¼ inch diameter, one 6 and one 3 inches long, make beautiful bearings.

Now then, metal bars for the comb to rest against we think cheaper and better than wire cloth and this is the way we make them:

Cut 18 strips ½ inch broad lengthwise from one of the sheets, and, with a tinsmith's folder, fold them lengthwise, leaving the two edges abont ⅛ inch apart. With a pair of plyers bend the following figure from these strips, soldering on a piece as you bend them up, and have all the spaces exactly one inch, and rods just ten inches long.

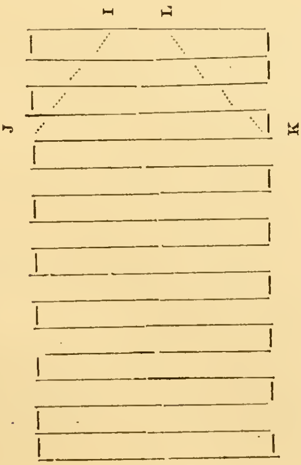


FIG. 2

When you have completed two of these, having sixteen spaces, they are to be put across from A to C and from D to F, and soldered securely, leaving, of course, one bar an inch above the sheets of tin and one the same distance below, as these sheets were but 14 inches.

If the wings are bent a little close to each other the bars will stay in place in the corners A, C, D, F against the ¼ inch edge while being soldered, which may be done very rapidly, for fastening the inch pieces that connect the bars makes all strong. Now cut four pieces 1¼x10 inches with a narrow fold on one edge. These are to connect A, D, and C, F, at both top and bottom and should come above the wings enough to be level with upper bars A, C, and D. F.

Now our frame is ten inches square and is all done when we affix some secure loops or stirrups at the lower ends of our comb cases to allow the frame of honey to rest just one inch below the lowest bar, which will leave the top the same distance above, for the machine is made just right for our Langstroth frame, so if you use a different one you can vary it accordingly. The lower bar is not sufficiently strong to attach strip of tin mentioned to hold the comb frame, so we prolong the outer end and bring it across the corner from I to J, (see fig. 2,) and the other end is soldered to the wing near the shaft, thence across to the next wing and then across to the metal bars to form the support for the opposite comb frame; a 20-inch strip ¾ broad being used, and a similar one on the opposite side, these strips being carried across about two inches from the corner at I and L.

We should have mentioned that the corners in the sheets at A, C, and D, F, may be bent nicely with the broad blade of a carpenter's square, after turning the ¼-inch fold, for the blade to rest against, as the blade is just two inches wide.

To cut the various strips used, a pair of "squaring shears," such as most tinsmiths use, greatly facilitates the work and does not bend or curl the pieces as they are taken off.

The above completes the whole of the inside work and foots up thus:

Three sheets tin at 15c............ ...	$ 45
Nine inches Stubbs' steel............	25
One half day's work....................	1 00
One quarter pound solder..........	10
	$1 80

To make the can, take four of the remaing sheets of tin and put them together longest way up and down with a ¼-inch rod put in the top; and bottom made of one sheet and part of another. This gives us depth of about 19 inches and diameter of about 17.

In the center of the bottom solder a small piece of steel saw plate, and on this a blank iron nut, with a hole in it, to fit our steel pivot; the longest piece of steel being used for the bottom bearing.

The short piece is to be used for the top after having soldered on one end a fixture made as follows: A three-cornered tin tube, ¾ inch long, and ¾ on each side, is made, and then each side is bent inward until they will clasp the pivot, leaving the three corners open enough to allow the three prongs of an apple-parer to pass into them snugly.

The pivot may be pushed in its place in the top of our revolving frame but not soldered until we have it adjusted to the proper length.

Push in the bottom pivot until the machine will revolve and allow the ends of your Langstroth frame to clear the bottom about an inch. This will bring the other end above the top edge of the can about ½-inch or a little more, so we must have our arm to support the center, raised enough to clear it. We would not have the can higher because it would necessitate raising the combs higher to remove them, nor would we have a bar clear across the top, for it would interfere with the rapid handling of the combs and we would have no greater depth at the bottom of the can, for we wish to work with it raised enough to run the honey directly from a tube, (make it large), level with the bottom into the bung of a barrel.

We use the gearing of an apple-parer, removing all except the main wheel and crank, small wheel with fork, and bearings of both. The parer should be of the kinds that has bearing to both wheels parallel, and not those with bevel gearing. The cast iron that holds the wheels is to be soldered securely to, or rather inside of a tin tube 2x⅝' inside measure, and perhaps seven inches long, in such a way as to allow the wheels to lie on the flat side of the tube and to work freely, the smaller one close to one end. This tube is to slide as tight as it can be pushed into another similar one 5½ inches long, and the latter is to be soldered fast to the top edge of the can on the opposite side from where the honey runs out; and this tube must be previously bent at a distance of about 2¼ inches from the point of attachment to allow the projection on the comb frame to swing under it. To make these tubes quickly and very strong, make them in two pieces, which are like shallow boxes without ends before one is inverted and pushed into the other. Thus you see the sides are double and when soldered have great strength. The two pieces for the bent one should have the sides, after turning them up square in a folder, cut down to the bottom where the angle is to be made, so that in bending the top those corners will overlap, and, when soldered, are secure at the desired angle and can then be fitted over the other piece and the whole soldered strong.

This arm will not be firm enough without bracing and so we must have a piece of tin fitted to extend from the bend in the arm down inside of the can about six inches, broad enough to extend also four inches each side, tapering to a rounded point at the lower end something like the brace to a coffee pot spout.

Your tinsmith will probably "grumble" more at this brace than at all the rest, but never mind, for it is all done now, when we fix a little ring on the under side of the movable tube to snap over a little knob of solder on the other to prevent it drawing out, only when we wish to remove the inside work, and our account stands for the afternoon's work thus:

Six sheets of tin used, and one extra for mistake in work at15c	$1.05
Iron around top of can	20
Parer,	75
Solder,	15
½ days work,	1.00
	$3.15
Inside work,	1.80
	$4.95

"Now Mr Novice, that's really too bad if you leave your description in that way. Why don't you tell them how to make a sloping bottom to the can, and molasses gate, etc., just as the one you have just finished is made? And you have used heavier tin, too; and what are your pupils to do when the barrel gets full as it often used to; and how are we women to keep the implement clean and free from dust and flies, etc , if a half inch of honey is always standing in it?"

"There! there!" No more at once please. First, it will cost more than $5.00. Second, we can't explain such a bottom. Third, a molasses gate costs 75 cents. Fourth, Our original extractor (that you wished back so many times after we sold it, and tried to use Peabody's and Gray & Winders') was made of roofing tin, with a flat bottom, and is good yet. Fifth, cork up the tube when the barrel is full, of course. Corks cost but one cent. Sixth, we can't remember *sixth*, and no wonder either."

"Never mind *sixth*. The machine that you have just finished, right here beside us, would be cheaper at $10.00 than the flat bottom can and "corks" at $5.00. A nice thing your "cork" would be to leave around somewhere as you always do until needed, and then have to hunt for it, barrel running over meanwhile. You may do so if you wish, but women don't work that way."

"Tell your readers to have the bottom made like an inverted tin cover, lowest in the centre, and to have an open channel leading from the centre on a gentle slope to the faucet, and a piece of tinned wire cloth over this channel, will strain out bees, etc. But it will not stand up unless a tin hoop is made to go around the lower end, reaching down as low as the mouth of the gate."

"To be sure and another heavy wire is needed around the bottom of this hoop for it to rest on, and so that some screws can be inserted through the tin just above it to fasten it firmly to the platform or bench on which it is worked."

Now kind readers, each one of you can decide whether the $5.00 style of the can, (which answers perfectly the purpose intended,) will be best, all things considered, or the more expensive form.

We have made one that allows the frame to be reversed inside of the machine, but as it is heavier and not so simple, we cannot really think it an advantage at present.

We have also one that has a close-fitting tin cover over the top, but after having tried both ways, we really think we prefer a round piece of white cloth to spread over it when not in use. A rubber cord run in the hem will be handier than tying on a string.

If any one thinks they would like one of the revolving-can machines as well, we have only to ask them to try both. One such machine as we have described, will satisfy any neighborhood as to which form is most practical.

P. S, Besides the coarse strainer over the "gate" or tube inside to keep bees from running through and crawling over things daubed with honey, we use a little sack of cheese cloth hung in the bung of the barrel and kept in place by a wire ring a little larger than the bung-hole.

◆

National Bee Journal for Dec. attempts to excuse "the selfishness, grasping and monopoly" of a certain individual by making, it appear that others are dissatisfied because they can't do the same way.

Now we have an old-fashioned idea that our best people do not want a copper ot any one's money unless they have rendered a fair equivalent.

There may be some who envy the success of the few successful "Patent right Sharpers," but we trust their number is daily growing less.

◆

DEAR NOVICE:—Many thanks for your little pamphlet sent occasionally to my address. I trust I may profit from your sage wisdom and advice, especially from that in your last Journal, wherein you say that 50 lbs should be the average from every good hive in the worst season. Honied words to such a blunderer as your correspondent, who could not with all the "Galloping and Novitiating" he was master of get his "full-blooded Italians" to gather nectar from flowers which secreted naught but fragrance wasted on the desert air of this arid, rainless district during the just very "worst season" it was my lot to ever encounter, and with all due deference to "Novice,s" wisdom and vast practical experience in Ohio I must still be allowed to have the benefit of the doubt if even he with his hives and apple paring extractor, and "Giantesses" as queen's regnant could have obtained such wondrous results in barbarous (speaking apistically) Canada.

Your bee-hive at $1.00, is what I long felt ought to be the general price, and I cannot see why, with persons who are at all competent to manage bees, that it cannot be made to answer every purpose that the most expensive patent hive does or can.

Trusting that you may keep on planning and improving for such ignoramuses as your correspondent, believe me me to remain

Yours very obligatory,
P. H. GIBBS.

The $1.00 hive is not ours, only the one we advise. To Langstroth belongs the movable frame; Gallup, the sloping joints for cover; Bickford, the quilt; common-sense, entrance, etc.; and to Novice, if anything, the credit of severe criticisms on all useless appendages. Every bee-keeper should be able to make them for less than $1.00. We only furnish a sample and they are poor workmanship too, we notify you, but will give you the idea.

HONEY COLUMN.

ORCHARD, MITCHELL CO., IOWA,
December 21st, 1872.

Editor Gleanings in Bee Culture:

You can tell the readers of your large journal that Gallup has 1,000 pounds nice extracted bass wood honey, all candied and securely put up in 150-pound casks at 15c. per pound, casks thrown in.

Hurrah for Gallup again, "old hats and new!" His offer is the lowest we have yet received and we have always felt sure he could produce honey cheaply if any one could. We paid 18c. for a half barrel a few days ago, and sold it for ten per cent advance; we didn't have the cask thrown in either. That is business-like, and if we can't find customers for all "Gallup," "Hosmer," and the other veterans can produce at that rate, we shall consider our great big journal a failure in one direction any way.

Dr. Hamlin says he has 3,000 extracted and 2,000 comb honey, but don't give the price.

Tell us what you ask, brother bee-keepers, and we will advertise all your honey for nothing.

Our old "American Bee Journal" made its appearance January 14, but as it contains nothing but transactions of the American Bee-Keepers' Society, we have no opportunity to form an opinion of what it will be under the management of W. F. Clark. We find a strange mistake in a statement from Mrs. Tupper that should be cerrected at once, viz: that when honey is extracted from brood combs the brood is killed. Was there no one at the convention that could prevent such an error from going out before the world? We cant' help saying that the matter looks anything but flattering for the convention of America. Large numbers of bee-keepers make a regular practice of extracting the honey from all the combs, and their brood don't die either. Mr. King may have kept still because the use of the extractor don't help the sale of closed top frames, but how about the rest? No one need waste breath in arguing the matter, for the experiment can be made at once. Revolve your brood as fast as you please and mark the comb and see if the brood dies. Unsealed brood, it is true, may be thrown out if turned too fast, but this is never necessary.

◆

Several articles alluded to in this number were crowded out, (problems too), by the extractor, and by the way we notice that Fig. 1st, gives the impression that more than one piece of tin is used for the case to hold the combs. Imagine the letters A. C. D. and F. clear up in the corners and the marks surrounding them a continuous line, except the dotted lines, and we think you can make no mistake. G. B. H. and E. of course, should meet, so that when soldered only a square hole is left in the center for the shaft.

◆

We hope our friends will be patient if we do not find a place fer their favors at once. Send along the items.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.

Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, February 1, 1873.

As we are now a monthly, those who wish the whole 12 numbers will please remit us 50 cts additional. To those who pay but 25 cts, we shall send GLEANINGS quarterly as at first proposed, after this number, which will be sent to ali, making five numbers for 25 cents instead of the four we promised.

Several irresponsible persons have had advertisements inserted in some of the Bee Journals, and in one case considerable sums of money were lost by our bee-keepers sending to them.

Will it not be advisable for our Editors to require reference in regard to the standing of their advertising patrons. It will be far less trouble than to require each separate individual to determine who is to be relied on and who is not.

We must positively refuse to advertise any receipts or methods of doing desirable things in the Apiary; for the first person sending the needed 25 cts or $1.00, could, if he chose, then publish it to to the world. Let information of all kinds be free, through our Journals, each one presuming that he will receive as much as he furnishes.

Samples, models to work from, or implements themselves, of course, have a cash value, but not secrets, as a general rule.

Reports of dysentery have already reached us in three cases. In the latter it affected only those colonies having natural stores; a part of them that were fed on sugar syrup were entirely heatlhy. A friend near us, fed all his colonies, 20 or over, except one, with syrup made by *pouring boiling water on coffee sugar* in a tin sap bucket. This was stirred well, and the syrup poured off when cold and fed in tin milk pans, with a cloth laid over the top. *Nothing more* All are healthy. One strong colony, and that was fed with *poor* maple syrup, died with an aggravated form of dysentery, in December, soiling every part of the hive badly. He forgot our instructions to use Cream of Tartar in his syrup, but the syrup did not grain in spite of what "Confectioners" tell us, see A. B. J., page 91, Vol. 8., and his bees are in as good shape so far as can be desired.

At the convention at Indianapolis, Mr. Hoagland says he lost bees that were fed on syrup.

Now as this is the very first case that has ever come to our knowledge, of the kind, we would ask Mr H. to give us full facts. Was the syrup made of *good coffee sugar*, and had the bees *no* natural stores? Our experiments have all pointed so positively in one direction, that we think we cannot be mistaken.

◆

HEADS OF GRAIN FROM DIFFERENT FIELDS.

EDGAR SAGER, Hudson, Ill., writes: "Signs of disease were noticed in some places quite early in the Fall," and that it looks rather discouraging; but it need not be so, for whenever they really commence to soil their combs, take them in a warm room and give them clean, empty combs in place of their old ones, and confine them to their hive with wire cloth until they can store some pure coffee sugar syrup in the combs and if a day occurs that they can be allowed to fly out of doors, all the better. In severe cases they must have a wire basket attached to the hive to allow them to come out in, while in the warm room, without soiling their hive and combs.

James Ferguson of Surgeons Hall, Pa., writes: "I am using King's hive, although it does not matter much what hive is used, during a dry June that dries up all the white clover which is our main dependence here"

But it does, friend F. Suppose you take your bees about April 1st, your very weakest colony for instance, put them on three combs only, and in a hive small enough so that the bees and combs fill it completely.

Now feed them, keeping the entrance almost closed and a warm quilt over them until brood begins to hatch; enlarge their hive as they increase, but always have them fill it, and they will bear considerable crowding in cool weather, and your hive must not be so tall as the one you mention or you will not be able to keep them clustered clear down to the bottom of it, which you *must do* always.

By May 1st, you will have a colony that will send out a host of workers if you keep them *crowded*, and by June, if you keep their combs emptied with the extractor, you will be astonished to find them bringing in honey in spite of dry weather or anything else.

Don't let honey enough accumulate in the hive at any time to induce the swarming fever, but keep raising brood and we should not be astonished if you before the season closed, should say, as our "women folks" did in 1870, that they "really wished the little chaps would stop, for we have got more honey than anybody would ever want."

S. L. Root of Austinburg, O., says: I lost one hive last Winter out of twelve of dysentery. I think it was the only one that had had no upward ventilation."

We have no doubt but that your colony and many others would have been saved by more ventilation, and at the same time had they been confined to a diet of pure sugar syrup this extra ventilation would not been needed.

We have colonies now, that for experiment have entrances almost closed and top closed entirely, as close as a tight, painted cover will close it, yet they are wintering without detriment: drops of moisture hang on the cover directly over the cluster, but the bees look perfectly natural: bodies are not distended in the least, and unless disturbed, no sound is heard from them at all. Natural stores are sometimes perhaps as wholesome as honey, but can we afford to run the risk?"

T. G. McGaw, Monmouth, Ill., writes. "The loss of bees in this section will be heavy owing to the extreme cold weather, 28 to 32 degrees below zero last week. Box hives mostly in use and no care given."

We have no doubt but that bees can be wintered out of doors safely, but the expense of the extra amount of sugar for food, would soon pay for houses for them.

J. Anderson, Tiverton, Canada, writes: "My bees never did better than last season. They are now in cellar, strong and healthy, and with plenty of honey, so I expect to have them in good condition in Spring."

"My queens are all young, and from an imported mother, but well marked, and excellent workers. I would like a queen or two a little brighter. How is this secured?" See article in next number, "How to Improve our Bees." But we advise you not to get the brighter ones if you want the best honey gatherers.

Job Huestis, East Fairfield, Ohio, asks if "the Lindens all blossom at the same time." The period of blooming varies as much as three or four weeks, as we observed in the forests about here last season, and we think varieties might be collected that would extend the period to two or three months.

George Porratt, Winnimac, Ind., asks: "will it pay me to get another kind of hive? I use the Quinby hive, 100 of them, 72 with bees in them, and 28 ready for use next Spring. I also use the National Bee Hive Extractor. Will it pay me to get another, if so what one."

We would not change, if you have Quinby's hive, with suspended frames, but those that are supported from the bottom we really can not think convenient. We have never seen the Extractor, you mention, but would use no extractor that obliges you to revolve the case and honey.

H. B. Rolfe, Westfield, N. Y, writes: "I see you have thrown honey boxes aside, but I think I will have to stick to them, from the fact that I am unable to handle frames readily on account of my right hand being crippled, I can handle boxes with my left hand. I would like to raise queens and try swarming artificially, but all the descriptions look too formidable for one hand business.

"I wintered my bees in cellar two Winters without loss, but one year ago I removed the honey-board as per Langstroth, and lost forty stocks"

We think you can handle frames as well as boxes, but of course you will have to "go slow" with either. Have the frames rest on a strip of metal, or the metal rabbet, so that they can be lifted out when handled by the middle of the top bar; we often take one in each hand thus. But the metal rabbet should always be fastened in the wood, so that the back is slanting in such a way as to guide the frame into its place when the projections strike it. When the frame is in place, not more than ⅛ of an inch end-shake should be allowed, but this space should increase as it is raised to work with facility; if the back part of the metal rabbet slopes up to the top of the end of the hive all the better, and then the projecting ends of the frame slide down the smooth surface of the tin very nicely. Any tinsmith can fold them very cheaply. We feel quite sure removing the honey-boards was not the cause of Mr. Rolfe's loss. Were none lost in your vicinity that had honey-boards left on.?

Mr. S. Rowell, of Blooming Grove, Minn. thinks he has a plan for securing the fertilization of queens, and asks if we think it of sufficient importance to be worthy of going to much expense in testing it.

We have never given any subject so much time and study with so little success as the above, and really think that if the plans given us now by the best authorities were successful it would be cheaper to let our bees manage it themselves and take the chances for their purity. Some of our friends thought they had succeeded, but careful examination has convinced us that the queens flew out after all, and some queens do squeeze through an orifice nearly or quite as small as that of the worker. Some one who has had experience may tell Mr. Rowell what he may expect of his plan without the trouble or expense of an actual trial. We have at present no faith in wire or cloth houses for the purpose.

Mr. Shaw who advertises on last page, has made many and some quite expensive experiments and with a patience and determination in trying all the plans recommended that we think deserved something better than total failures.

D. J. Bardwell, Omro, Wis., describes an extractor with a *revolving can* to hold four Langstroth frames as they stand in the hive, which he thinks would suit us; from which we infer that Mr. B. must be a very large, strong man. If he has a little girl ten years old and he will make her a machine such as we have described, we think she will empty the combs faster than her father with his machine.

G. W. Gamble, New Florence, Pa., asks if the metal-cornered frames may be used interchangeable with old frames, and if old frames can be used on the metal rabbit; and we reply: Without any trouble whatever.

Wm. Aschom, Ligoneer, Pa., asks if the Italians stand the winter as well as the black bees with us, and we answer, they stand the Winter and *everything else* much better so far as our experience goes.

And the next is from a lady, thusly:

FRIEND NOVICE.—Yes, I will take your little Journal on one condition, and that is, please send me with the first number a tin type of yourself and wife. I want very much to see the man that can stir up the brethren so easily.

Respectfully Yours, Mrs. L.

Now we are awful sorry, but our best friends are those who have never seen us, and we should much rather risk sending you a a "photo" of our Apiary than our own "phiz" and loose your good opinion and all prospect of future "25 centses."

Our "better half" thanks you kindly for the compliment, and says when the "photos" of the Apiary next June, (including Novice and his family, "Extractor" and "presiding genius," and all,) *are ready* that you shall have the first one mailed.

Mr. J. S. Flory, Orchard View, West Va., asks for "best method for bees to raise brood early. In this locality, our great honey harvest is in the Spring, and if they are not strong early, much is lost."

We believe we have touched all points we know of except one, and that is to close perfectly all upward ventilation, and as bees in the Spring are almost invariably clustered close to the top of bars, a quilt will confine the animal heat much better than a heavy board. We can't dispense with the quilt even if we have to renew them every season.

Also, we must not have an empty cold space below the cluster, to avoid which we know of no remedy except shallow hives; and the entrance should be small and in such a way that the wind cannot blow into it as in the $1.00 hive for instance. *Plenty of food always of course.* Bees use *all* their stores in raising brood in May, oftener than is generally known. *This must never happen.*

F. M. Woolard, Fairfield, Ill., says: "By the way don't you leave a 'big gap' open in your sweeping assertion on 1st page, Dec. No. A. B. J., that its the bee-keepers and *not* the season?"

Follow directions given J. S. Flory, and James Ferguson and see if you do not agree with James Bolin and ourselves.

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advanec; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

ALSIKE CLOVER SEED—A nice article, pure with the exception of a small quantity of Timothy seed; 50c. per pound by mail or 35c. by express. A. I. ROOT & CO, Medina, Ohio.

FOR SALE—A FEW CHOICE COLONIES OF Italian Bees, warranted pure, at $25 each. Also 20 colonies, not warranted pure but in excellent condition for honey storing, at $20 each. All in movable comb hives. Apply to ITALIAN BEE CO, Des Moines, Iowa.

ITALIAN BEES—We offer for sale about 200 colonies of Italian Bees in the American Movable-Comb Hive. Also Queens throughout the season. Purity and safe arrival guaranteed. For further particulars, prices, &c., send for circular.

BALDWIN BROS,
Sandusky, N. Y.

CHOICE ITALIAN QUEENS FOR 1873—I have increased facilitses for rearing Italian Queens the coming season. The choicest Queen-Mothers to breed from, and no black Bees to interfere. Send stamp for circular to W. J. DAVIS, Youngsville, Warren Co, Pa

ITALIAN QUEEN BEES FOR 1873—Will be bred from Imported Mothers, one of which is one of Charles Dadant's importation. Persons who purchase Queens of me will get what they bargain for. Send for circular.

WM. W. CARY.
COLERAIN, Franklin Co., Mass.

R. M. ARGO, IMPORTER and BREEDER of Pure Italian Queen Bees, I would say to my friends and customers, that if I am fortunate in getting my bees safely through the present winter—as I generally have been, heretofore—I will have for sale, early in the spring, about twenty-five colonies with choice queens. I also expect to have a few queen breeders to spare in April. Having the advantage of a more Southern location, I can furnish queens earlier in the season than Northern breeders. All communications promptly answered. Please enclose a three cent stamp for letter. Circulars sent free. Address, Lowell, Garrard Co. Ky.

PRICE LIST OF PURE ITALIAN Queens and Bees from Shaw & Daniel's Apiaries, for 1873:

For last year's Queens, sent as early as the weather is suitable, $5 each.

Tested Queens, during the season, $4 each.

Untested Queens in June and July, $3 each. After the 1st of August, $1.50. All Queens sent by mail warranted pure and fertile. Safe arrival guaranteed.

Nucleus' Hives containing pure Queen, with 6 frames each, 8½ by 9½, $8 each. Can be built up into strong swarms or used for wintering surplus Queens.

Full coloneis in one story Langstroth Hives, ten frames each, $13. Wide hives with movable partition board from 14 to 17 frames each, $15, Two story hives containing 21 frames, $15 each

American Hives, containing 9 frames with space between top bars, $15 each.

Each colony will contain a young Queen and 9 frames of comb, with extra frames. Sent by express and safe arrival guaranteed. Address

J. SHAW & SON, Chatham Center,
or J. E. DANIELS, Lodi, Medina, Co., O.

"NOVICE'S" Gleanings in Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., MAR. 1, 1873. No. 3.

STARTING AN APIARY.

No. 3.

IN making hives, whatever shape or form you decide upon, be sure and have the grain of all the boards run horizontally. If this point were recognized by our "patent hive" venders, much less annoyance would be experienced from the results of using imperfectly seasoned lumber, as it is well known that shrinkage takes place almost entirely at right angles to the grain; and where hives are made as above, even if the lumber be unseasoned no bad results follow, except to decrease the distance between the lower bar of the frames and the bottom board, and accordingly where our pine boards are unseasoned, we should allow from one-half to three-fourths of an inch, presuming they may at no time come nearer than three-eights of an inch.

Also: *It will pay you to take time to put every board on the hive in such a way that the heart side of the board comes outward.* Every board is to be examined with reference to that at the time you do the rabbeting. Boards are always more disposed to warp in such a way that the side that grew towards the bark of the tree will be hollowing, and in hives exposed to the weather, if we can keep the corners and edges of the boards close up to their places our hive will keep tight; also the dampness of the bees inside contrasted with the hot sun outside, is inducement enough for the boards to curl up without having them put on "wrong side out."

For this latter idea we are indebted to a mechanical friend whose skill and researches in regard to the properties and fitness of wood or metals for industrial purposes, are destined soon to make him better known to the world. The success of many of "Novice's" plans and contrivances has been very much due to this same *Mr. Alvah Washburn*, especially the Windmill and attendant machinery.

Since our last we have succeeded in making the entire body of the dollar hive of lumber 12 inches wide, which is quite an item, as we can thus get along without waste and as it is a staple width can always be purchased at a low figure. Get boards 12 feet long dressed on both sides to ⅞ of an inch accurately in thickness, and cut each one into four pieces of equal length. After you have straightened one edge of each piece, removing as little as possible in so doing, cut a side and end from each; lengths, 16 and 19½ inches respectively. Rabbet all the ends of the end pieces ⅜x⅞, and bear in mind what we said about having the *heart side* outward. We must make it a study to handle each piece as few times as possible and to facilitate this we have devised the little arrangement illustrated by the following figures:

Fig. 2.

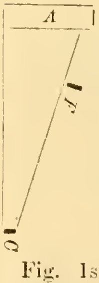


Fig. 1.

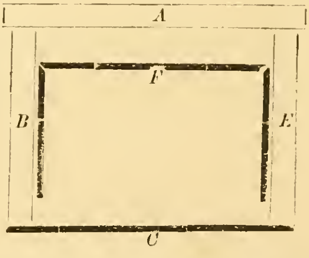


Fig. 1st is a top view of our wedge shaped platform for sawing all the bevels, and Fig. 2d, a view of either of the ends B and E. The three pieces A, B and E, are made of our ⅞ pine boards. A is 3½ x15 inches and B and E are 2¾ inches, where A is nailed into them, and ½ inch at the small end, and just 12 inches on their longest or upper side. C is simply a strip to hold them together. F is a spring stop just 1¾ inches nearer the saw than A, and is simply a strip ½ inch thick screwed fast, to two hickory springs fastened on the inner sides of B and E in such a way that it can be pressed down between them level with their upper edges, but rises again when allowed to. To use the apparatus set the guage bar on your buzz saw table so A will slide against it and just allow C to clear the saw; now hold the finished edge of either one of your side or end pieces close up against A, and of course the other edge at C will be straitened, beveled, and the piece brought to an equal and proper width at one operation, the spring stop F being pressed down meanwhile; we now turn the board over and let the beveled edge rest against this stop, which allows the saw to cut off on the same bevel a strip 1¾ inches wide. These strips have one square edge which fits in the ⅜x⅜ rabbet in the cover, and the other edge is on a bevel just to fit the bevel of the top edge of the hive, for it was sawed off from it. To make the bevel around tne top edge of the cover, stand our little machine on the side A, with C straight up; place the board for cover after it is rabbeted, against B and E, with the corner of A in one of the rabbets; set the guage sufficiently near for the saw to bevel the edge back about ⅞ of an inch; when you have thus beveled the top on each of its four sides, our hives are finished except the rabbet to hold the frames in the end pieces, and we now make them ⅜x1 inch instead of 1¼ as given in our circular. We should prefer 1¼ inches as it makes more room for the quilt, but in that case the distance between the frames of the upper and lower story is rather too much, although we have for several years used two hives in which the space is 1½ inches with no bad results; energetic "Hybrids" even, preferring to make comb in the frames and only filling this space when they were "out of a job" otherwise, and in very hot weather we have thought that this air space much assisted ventilation. If we use 12 inch lumber every fraction of an inch in width must be economized.

We make the Gallup hive in this way of 14 inch lumber, cutting off lengths for cover and sides exactly 19½ inches, for ends 13 inches, and making our rabbets in *side pieces* instead of ends. Allowing for saw cuts we only require about 7¼ feet in length by 14 inches in width, or 8½ feet of lumber for the hive complete; costing not to exceed 22 cts. per hive when bought in quantities, and the amount is just about the same for the hive we use.

"Mr. Novice why *do you* keep calling a body and cover, without any bottom board a *hive*; if *two* of them are required to make a complete hive why not call it a $2.00 hive at once instead of 'the dollar hive?' And again we are afraid your readers would hardly call a hive without frames, what is generally understood by the term 'bee hive.' Let us see:

A two story hive is..................	$2.00
And 20 frames such as we use at 6c	1.20
Quilt..	0.25
Door step....................................	0.10
And we have expense of hive complete	$3.55

Instead of your modest 22 cts. that you were so complacent about when we interrupted you."

"There now! Do you see how much mischief you have made? It will take us so long to unravel your figures, as above, that we shall get no room at all for the 'Windmill,' and for 'April,' we shall be obliged to go over transferring, and for 'June'——"

"Please don't borrow trouble about June, for its now only Feb. 11th, but tell us how to get from 22 cts. to $3.55."

"Well, all right; now just see if we can't make a good hive for a dollar." If the lumber only cost 22 cts., the hives can certainly be cut up and nailed for 50 cts. more, and frames such as are ordinarily used do not cost over 2 cts. each, making 92 cts.; in place of quilts something can be made of old carpeting, coffee sacks, or old clothing for the remaining 8 cts.; and most bee keepers that we have visited place their hive on some kind of a board, bench, stand, or platform, in which case no bottom is absolutely necessary, especially in warm weather, and box hives very seldom have any, and now as we have shown how a very durable and most convenient hive *can* be made for $1.00, we will add that *we* should prefer to throw all the old boards, clothes, and benches away and make two of the "dollar" hives for each colony. Use the cover of one for a bottom board for the one that contains the bees, and all is complete during the honey season; at other times of the year keep your spare combs set away in the spare bodies, piled up on each other, and the workmanship should be such that they fit on each other close enough to exclude not only mice but ants and moth millers. In the swarming season these hives without a bottom answer temporarily, very well; see what Adam Grim says on page 213, Vol. 6, *American Bee Journal.*

Our idea is that we want the fewest possible implements, consistent in an apiary, and want those as light as possible and made with no superfluous lumber or metals. In nailing the hive just mentioned, nail the corners well, and drive the nails as near the edges of the boards as can be done without splitting. Use seven-penny nails to go through the whole thickness of the boards and "fours" to go through where the rabbet leaves only ½ inch. We use four nails of each size for each joint, and drive them as near together as we can without striking where they cross each other. Make up your mind that you will learn to drive nails just where they should be, and don't let their points ever show themselves by running out of the wood. Make your hives such that they will never come apart or loose if used yearly for a lifetime, even if they have no *stationary* top or bottom. Paint them as soon as done with the Averill chemical paint, (white,) and *keep them painted.* We should never use any thing but pine lumber after what experience we have had with other kinds.

◆

WE are just advised of the sad intelligence of the death of Mrs. Langstroth.

NOTICES OF OUR BEE LITERATURE.

OUR old *American Bee Journal* hails now from Chicago, and the Feb. No. is fully equal in value to what it has been formerly, and in some respects considerably improved.

In our January No. we spoke of queens offered to subscribers by the *National Bee Journal.* Our remarks there referred to Mr. Mitchell's offer some time ago. We learn the present proprietors (Mr. King is only one of them) have shipped a large number of queens and we believe propose to send all. If such is the case we certainly would wish them the success they deserve for making not only *their* promises good, but their predecessors.

Mr. Moon says in his *Journal* that we evidently have had but little experience, which is just what might be expected from the "Gleanings of a Novice." His Jan. No. contains several good articles from some of our best bee keepers. If Mr. Moon would tell us why he "has seen the folly of advertising queens as premiums," we should perhaps feel more neighborly. We can't see any folly in making good all promises to subscribers, whether we are out of pocket thereby or not.

Mr. King has given us two numbers of the *Bee Keeper's Magazine*, without any "patent hives;" and in the last he gives us some funny pictures about "hiving bees when the ladder broke."

Mr. R. Wilkin, of Cadiz, Ohio, sends us "*Bee Culture*," and, although it don't tell about the extractor, it is so full of quaint truths that *must have been* actual experience, that we can heartily recommend it. It shows plainly that Mr. W. cares more to give real aid to his readers than to impress them with the extent of his own knowledge or skill. *A rare virtue.* Price 25 cts. paper; cloth 40 cts., and well worth the money to any bee keeper.

WIND AS A MOTIVE POWER.

FOR driving the circular saw used in making the hives we have mentioned, we decidedly prefer a Windmill. We have no trouble with engineers, fires or firemen, and our Windmill has taken almost entire care of itself for the past two years we have used it; spreading its sails to catch all the breeze when more power is demanded of it, and then again turning them out of the wind when it has accomplished the work or when the wind rises to a gale, for our hands now work right along unconcerned amid our "fiercest blows" feeling confidence in the windmill's ability to take care of itself and spread only just so much sail as is needed to do the work.

We regret that it seems next to impossible for effective windmills to be home made, and to be also made so as to withstand the high winds that they are necessarily subject to. In our boyhood days we made windmills that furnished considerable power, but alas, the beloved windmills and our hopes too, were dashed to the ground by the first wind storm.

Some one in the *Scientific American* a few months ago, spoke of making them strong and "letting 'em spin" when not wanted to use; but we think the folly of such a course could be demonstrated by about *one experiment.*

The *American Agriculturist* for May, 1872, gives a drawing and some very sensible directions for a home made mill of small power; and we see no particular objection to their plan except the trouble to go to the top of the tower whenever it was to be stopped, for a windmill to be effective must be elevated above surrounding objects entirely. To get the necessary strength and durability, considerable iron work must be used, and this can be made much cheaper at a special machine shop for the purpose than by private individuals.

Our mill is of the "Continental Co.," sold by A. P. Brown & Co., 61 Park Place, N. Y. It is 17 feet in diameter, price $400. Is elevated on a tower 55 feet from the ground and was rated at 3 horse power, which we think is a very fair estimate.

The U. S. Wind Engine Co., of Batavia, Ill., also do a large business in making windmills and we give below an extract from a letter just received from them in regard to their mills:—

"We make a 12 foot power mill, but do not consider this size of sufficient power to run a circular saw with any degree of satisfaction. We think the 16 foot mill would give good satisfaction in every instance. We cannot recommend the 16 foot mill for running much machinery at the same time. We understand the sawing to be done to be of very light stuff, and therefore have said that we thought it would satisfy. We would, however, prefer to sell the 22 foot mill.

Respectfully, Yours,
U. S. WIND ENGINE AND PUMP CO."

Prices of the above mentioned mills are about 150, 350, and 550 dollars. Both companies we believe are prompt and reliable, and prices are probably not much different for the same quality of work. To sum up, our advice would be if you think you are smart enough and care to take the risk of having it blown down, build a home made windmill; but we believe we should prefer to invest the $150 and have one that we know was all right, even if it were necessary to wait for a windy day to do our sawing. With a 16 or 17 foot mill such as we use you could probably saw, on an average, three days in every week; more in winter and less in summer. With a 22 or 25 foot mill, even a gentle breeze would be sufficient to run buzz saws or almost any kind of machinery, and there would be few days in the year so still that it would not run. Further particulars may be had of the manufacturers.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, March 1, 1873.

You can work nearly twice as fast in cutting up stuff for hives and frames, if you have a child to assist, by handing the pieces and taking them away.

◆

We shall really have to give up telling what we are going to give next month, for so many new things are coming up continually, that the best we can do on our limited number of pages is to consider what seems to be of the most interest to the greatest number at the time.

◆

We most heartily commend President Quinby's address, to N. E. Bee Keepers Association, given in Utica Morning *Herald* of Feb. 6th. We really wish our pages were sufficient to give complete, one of the ablest efforts of a great and good man.

◆

Problem four develops such a variety of opinions that our "Table" at present would be a sorry affair. Please don't get into any argument for we want *truth* in this matter, and argument seldom calls it forth; and don't theorize, for we want *facts* only from *experience* in this.

◆

In our first two numbers we made an error in giving the price of Messrs. Shaw & Daniel's untested queens, after Aug. 1st $1.50, instead of $2.50 as it appears in this number. Mr. Shaw's plan of wintering queens in a hive containing 6 frames just half the length of the standard Langstroth frame seems to work well. The little hives are neatly made and it seems to us there can be no cheaper way of getting a queen safely, very early in the season, for they answer almost every purpose of a full colony, and the expense of shipping is much less. For shipping and for wintering surplus queens, we are inclined to think such small hives will pay, and we should like to hear from bee keepers on the subject. For the sake of having them a *regular uniform* size we suggest a frame 8½x9⅛, and then five frames would make them just one-fourth the capacity of the standard Langstroth hive; at any rate *do let* us have them with frames interchangeable when we buy and sell hives.

◆

We learn the great yield of honey obtained by Mr. Davis, of Delhi, Mich., was principally from a yellow flower that sprang up after a swamp was burned over in the fall of '71. Will he please give us a full account of his swarms and surplus, and also of the plant mentioned, and how "the bees filled with honey, combs built on the *outside of their hives*" because he "hadn't time" to give them room inside.

◆

We hope our readers will excuse us for declining to send any articles pertaining to Bee Culture C. O. D. Our profit is too small to even pay "return charges" on money. Send us Post Office orders payable *in Medina*, or New York draft. As letters rarely miscarry now a days, small sums can be sent safely by mail. We have heard of but few failures in over 500 letters sent us in the past two months.

◆

Our bees were placed on their summer stands and enjoyed a full flight Feb. 19th and 20th, but we put them back again "cause it went below zero;" and we are sure it paid, for we found one queenless colony and one almost "*bee-less*," also, that we combined much to *their* satisfaction as well as *ours*. All were in fine condition except some weak nucleus colonies made quite late to save surplus queens. Seven out of twelve of these were all right, but the remaining five were fed as late as November and having too few bees to seal up their syrup before being "housed," they quietly "slid out," and now we have only 69 "living hives," all good except one with a drone-laying queen and all *old bees* for an experiment, but with sealed combs of syrup, they are healthy and bright, although their numbers are decreasing. When we returned them to the house, mercury stood four *below zero*, and even Hybrids, when disturbed were content to dive down into the cluster after a "very brief" show of war, such as "standing on their heads, etc." Although they were "housed with a rush," scarcely a bee was lost.

HEADS OF GRAIN FROM DIFFERENT FIELDS.

DYSENTERY.

WE insert the following as it gives a very fair idea of the great bee disease or dysentery:

I can give you nothing that is fresh in the bee keeping line. It must be the old story over, and what do your care for that? We shall never get *tired* of talking of our losses last spring and winter. For 16 years past I have wintered my bees in one place, a large dry cellar, from 80 to 100 swarms, and often not lose a swarm. Last fall my cellar was never in better condition, all the stocks strong in bees and honey, honey very thick, all frames nicely capped, and hives properly ventilated. The dysentery began its work about the first of February picking out here and there a swarm, ten or fifteen swarms were not affected at all; but all were very much reduced in number caused by the confusion in the cellar of the affected swarms. My actual loss in the cellar was only 4 swarms from 83, but when I carried them to their summer stands in April, then the few bees left in the affected hives, with their queens in every case, came out. So of those small swarms that came out the first day and lit in one swarm most all of them had queens, left brood in all stages, plenty of honey, hive dry and in good condition, for the excrement was on top of the honey board and outside of the hive, I returned many to their own and other hives, gave them fresh box honey, but stay they would not, for when flowers came I had but 40 left from 83, and they were in very weak condition. To show you I had bees enough when my bees went into winter quarters; I carried out in the spring 4 bushels of dead bees from the cellar bottom. Bees were swept off all over our State in this way. We had a hard drought to contend against this summer, very little swarming and but small amount of box honey. My bees, 51 swarms, are back in their old winter quarters and in very fair condition. Let us see the result this winter,

Yours, Truly,
Ripon, Wis. R. DART.

We presume you all know that we take the position that there are always at hand simple remedies for all evils in bee keeping, if we only work earnestly to get them; and in Mr. Dart's case we would first intimate that however thick and good honey may be, it does, nevertheless, often produce the result mentioned; but had their stores been sealed sugar syrup no such confusion would have resulted. In regard to leaving their hives in spring as the result after such excitement, caging the queens for a few days might have saved them, but great care would have been necessary to see that they were not deserted and chilled. Mr. Hosmer's ideas in *Bee Keeper's Magazine* are good but not quite sufficient we think. One of ours swarmed out in this manner three times last spring and only gave it up when we gave them a new locality. Mr. Shaw, Chatham center, this county, uses a contracted entrance to keep the queen inside, and if the bees go back to their own hive all is well. He lost more queens in this way with clipped wings than those which were not clipped for they will assuredly swarm out all the same.

FEB. 10th, 1873.

A great many bees are dying in this part of the country this winter, from the combined effects of dysentery and no shelter during the long continued cold weather. I have lost six of seventeen, and expect to lose more. Others have had still greater losses; one man has but five left of fifty-five; another four of thirty, others have lost various numbers ranging from three to eight, from lots of ten or less to thirty; the loss being greatest where the bees were increased most by dividing last summer, the result is that some are begining to decry movable comb hives and extractors. One man said to me "I tell you you must throw away those *patent hives* and take the old *box gum.*" He doesn't take the *American Bee Journal*. Another has sold his extractor for half price, offers his empty hives for sale, and is going back to the dark ages of the box hive. He doesn't take the *American Bee Journal* either. Hoping these rough items will not weary you, I am

Respectfully, Yours,
Hudson, Ill. EDGAR SAGER.

Bless your heart, brother "Novices," send along the "rough items" by all means. And above all things give us reports of the disasters and difficulties in bee keeping. We believe those who have the best opportunity of judging, agree that dysentery prevails alike in box hives and frame hives; and among those wintered in doors and on their summer stands; and also those that gathered their honey early in the season as those that had all but the late honey extracted: though single localities may seem to favor at times any one of the above reasons given. So many cases have been reported when the honey was thick and capped over that we are forced to think that thin or even sour honey has but little to do with it, but until some one can give us a plain direct fact, showing that bees have ever been troubled with it when confined to a diet of *pure sealed sugar syrup*, we must insist that the preventive is simple and still easy. Could our readers all see *our* bees at this date, Feb. 12th, healthy, natural and quiet, we think they too would have some of the faith that we have. One marked colony that was given mostly natural stores, as an experiment, has soiled the front of their hive; and bees are dying with it in our neighborhood, but we think from reports that colonies left out doors are dying most. We most sincerely pity the bees and their owners, but feel sure that this great drawback to successful bee keeping, is sure to be made to yield to our earnest endeavors to conquer it.

J. W. Johnson, Shelbyville, Ind., writes: Bro. Novice.—Will not three or four thicknesses of newspaper answer the same purpose of your quilt? I use this, it is cheaper and more convenlent than quilts.

We have used them some, but they tear easily, are more trouble to put in place and our bees tear them up and cary them off in little bits.

Geo. F. Palmer, of Cincinnati, Ohio. "Do you ever sell *specimen copies* of your Gallup style of hive?"

Yes, and can furnish them at the same price as the "dollar" hive, but if questions keep coming at the rate they do now, we wish some other bee keeper would make *better* hives than we do and sell them *cheaper*. It can be done.

Dr. W. H. Sedgwich, Granville, O.: "What will you take to make me one of those extractors described in Feb. No.? Your workmen in Medina know better how to do it than any tin smith who has never made one, that's all."

But our tin smiths don't, for Novice does it mostly himself, and the freight on the articles mentioned in the last two questions would more than make the difference in expense. Go to work *with* your tinner and show him how. Our time is so fully occupied already that some one could certainly make them cheaper than we can, but to those of our friends who insist upon it, we have promised to make them as cheaply as we can. Every bee keeper to be independent should make his own hives and extractor at home, and the business of "Gleanings" is to tell him how.

Mr. Palmer, of Hart, Mich., replies to our question in the Jan. No:—Mr. Novice:—I use simple two story hives of different widths. The smallest is fifteen inches wide and contains twenty frames, ten below and ten above; the largest is twenty-two inches wide and contains thirty-two frames, sixteen below and sixteen above. The frames are 9x18 inches inside measurement. To prevent swarming give a young queen plenty of room and take the honey with the extractor. I keep the queens wings clipped and if I have a choice queen that I want to be sure and not lose, I use Quinby's queen yard and it works like a charm.

Mr. F. W. Chapman, Morrison, Ill., answers Problem 1st, and sends us a sample of beautiful hard candy that we think cannot fail to answer. Many thanks Mr. C. We should have no fear of the acid at all:

It is prepared by adding to each pound of sugar 1 gill of water and 1½ table spoonfuls of "cider vinegar" all boiled together until it will harden when dropped in cold water and be brittle, about 15 or 20 minutes boiling. When cooked pour into pans (greased) and when partly cool cut it into shape. You see there is no expense and but little trouble: by pulling and working it makes nice cream candy, very white. I have fed it to bees like this and have seen no bad effect from its use. Do you think there is acid enough in it to do injury if fed largely?

We presume everybody knows by *this time* what remedy we would advise to our friend who comes next. How his bees can be saved *without* an extractor we don't know.

The greatest drawback to bee keepers in this part of the country is what is called honey dew; it is always followed by dysentery. There has been three crops of it in twelve years, and I have lost more bees from that cause than all others. This has been the case as far back as I have any knowledge of bee keeping. My father lost bees from the same cause more than thirty years ago.

Yours, Truly,
New Salem, O. MORRIS SMITH.

Loyd Jones, Galva, Ill., writes: "I am a beekeeper but have only four swarms: am fifteen years old, but that don't make any difference; I like your style of writing and your good common sense, but never mind send me the "Gleanings."

Many thanks to our young friend, we *will* try and not "mind" in any way that will detract from the common sense he has given us credit for. When we can help you call on us, for we have lots of work for you and all bee keepers of your age. Tell us about your four hives: what kind are they, have you a neat tidy place for them, with everything square, clean and business like? Make everything as slick as a banker's office and when "trade opens" be sure and 'do your part."

W. F Patterson, Freestone, Ohio, writes: "I fed a part of my bees with *syrup, they* have come out but little; the others have come out every chance and soil everything near them, and I much fear they are diseased."

WEST LODI, Ohio, Dec. 18th 1872.

Friend Novice:—I am using the standard, two story, Langstroth hive and last summer I found that in some strong stocks, after putting on 12 four lb. honey boxes, all an eleven inch cap would hold, there would still be a cluster of bees outside; so as soon as the bees had got fairly started in the first 12, I raised them up and put 12 more under them, thus making them four boxes deep, and I found that strong stocks would fill the entire 24 boxes almost as soon as they would twelve. In this way I attained over one hundred pounds each, from a number of stocks, notwithstanding our old fogy bee keepers say the season of 1872 was the poorest we have had for ten years. I neglected to state in the proper place, that when I put on 24 boxes that I took the cover off one cap and then put that on the hive and the regular cap on the top of it, thus making a three story hive. I have sold all my box honey at 25 cents and extracted at 18 cents. I have 88 swarms of bees, all Italians, stowed away nice and snug in a house similar to yours. I have wintered my bees in it for the last two winters and they come out all right, whilst the neighbors bees on all sides have died. Please excuse the length of this rambling letter, and may long life and unbounded success in his chosen pursuit, fall to the lot of "Novice," is the wish of his friend JAMES BOLIN.

If it does seem that any body should be satisfied with such a result, we can't help thinking that Mr. B. would have obtained 400 or 500 lbs. had he used the extractor. At the price he quotes extracted honey don't seem to be much behind.

Wm. Witter, of this place, has just lost a fine colony that had eggs and brood, and *plenty of stores* of sealed *sugar syrup*. An examination shows that their brood is located at one side of the hive and their abundant stores on the other; all their food being exhausted within reach, and the weather very cold gives us the cause as plainly as if written on the hive. When we wintered out of doors we lost many in just the same way, and if those who advocate "double walled hives" and summer stands, will tell us how to obviate an occasional case like the above, we should be glad to hear it. The double walls may prevent the sun from warming them up the first sunshiny day, and thus cause their ruin. In a properly constructed bee house (and we are now collecting all the items we can for directions to build one) the bees can at any time go to any part of the hives for stores.

C. B. Porter, Ann Arbor, Mich: "I have studied hard on your extractor and don't understand it."

Tell us what you don't understand and we will try again.

J. Hunt, Sparta, Ga: "I have spent fifty-three dollars and have made as complete failure as you ever heard of. I have one colony less than half I commenced with last year; paid for two queens and lost both. I now write you thinking you can put me right."

We are afraid some of our friend's money went for "patent rights." If so it's gone, but friend H. don't let any more go that way. Before warm weather comes we'll try and tell how *not* to lose queens.

C. W. Stokes, Atchison, Kan.: "I kept the weight of two hives and they kept within one or two pounds of each other all summer, the best one gave 140 lbs. I took 70 lbs. of basswood honey, at one time, from one hive."

We feel quite sure that the latter colony must have labored at a considerable disadvantage with 70 lbs. of honey in the way.

John A. Buchanan, Wintersville, O., writes: "All my bees had to be fed heavily to carry them through the winter except six that were in long hives with long frames; and they averaged no better in the spring than the rest of the stocks that are in hives with short frames. Some of my hives are tall, the *gate post kind*, (American Bee Hive we presume —ED. GLEANINGS,) with *divers sticks of wood to brood*. The spring being cold and unfavorable for breeding, bees increased slowly save under the most favorable circumstances, and this is the case when bees are in long hives containing long combs, so the brood can be extended horizontally without the necessity of having to divide the cluster to take in more frames until they have increased in strength sufficient to permit such a change.

S. Hathaway, Muncie, Ind: "From the best information that I can gather in regard to the present status of bees in this section of the State, I am led to believe that three-fourths of all the colonies are dead, and the remaining one-fourth very weak in numbers. Some of the colonies appeared to have dysentery; others looked as though they had frozen to death; and those the best supplied with stores appear to have suffered most."

If things are really as bad as the above, we don't wonder that bee-keeping is considered precarious. We trust, however, to learn better. For reports as to what may be done with bees that *are* wintered see the following:

NOVICE:—I put into winter quarters last winter 46 hives, sold two in the spring, and had 38 left, the rest having died. From the 38 stocks left I got 112 swarms, and we estimate they had 7,000 pounds in stores. This may not be interesting. N. B.—We give our whole plan for a new honey extractor only by request: the same also of our new hive, which, we think, will do away with Mr. Palmer's troubles with propolis. Our own opinion is, we have the best hive ever invented, and the cheapest. Will never have it patented, nor anything we may happen to invent.

J. L. DAVIS, Delphi, Mich.

P. S.—Send "Gleanings" *quarterly*. Your mode of managing bees is *not* adapted to this locality. I have an extractor very similar to yours, but I will not use it except to give room for the queen, which necessity does not occur oftener than once in four or five years. I use the Langstroth hive (heighth ten inches) and but one size frame for hive, and but one size *small* frame for surplus and nucleus hives.

W. J. DAVIS,
Youngstown, Pa.

Many thanks, Mr. D., even if your criticisms be somewhat strong, for how are we to improve unless we have *kind* friends to tell us of our failings. If you are as ready to learn as we are, which we cannot doubt, we hope to show you that your extractor can be used profitably *every* year, and on the other hand we admit that comb honey in some form will be in such demand for years to come that its production must be considered; and Mr. D. gives a most excellent idea, viz.: using the half length frames, mentioned on another page, for nucleus hives, for box honey also, or rather for comb honey, and these small combs can be removed one at a time as soon as sealed, and bees brushed off without trouble. We have been informed by those having sold honey in this shape that it brings the highest prices in the market and sells readily singly, or in suitable boxes by the quantity.

ARE EXTRACTORS "DANGEROUS?"

AN effort is being made by patent hive men and others to make it appear unsafe to trust "beginners" with the extractor. "They'll make mischief by throwing out the brood, starving the bees, etc." How is this, fellow *novices?* How many years experience will it be necessary to have before we learn that bees will starve if all their honey be taken away at times when they are gathering none? If you wish to have the same number of colonies in the spring that you had the fall previously, *invariably*, *we* say remove *all* their honey in September, and replace it with sugar syrup which at present cost does not exceed 10c per lb. When you can't sell your honey for that write to us.

In extracting if you turn considerably faster than is necessary to remove the honey, you will throw the unsealed brood out. If our Young American bee keepers are not bright enough to learn the two above simple points *in a few weeks*, they ought to be—— ahem, obliged to come and see "Novice" and let him talk to them. *We* say give us the extractor the first thing: "*We* want to see the folly on't too," as we once told our grandmother.

When we have thrown *out* some brood and starved a colony or two, *to see how it works*, we'll learn.

We can give you the addresses of bee keepers who have bought bees and extractors and made a fair profit the first year: and so can you, each and every one of our readers if you only think so, and are willing to work, study and learn. We should have much greater fears of your bees starving if you took advice from box hive bee keepers or venders of "closed top or side frame" hives, than if you used your own "common sense" unaided.

◆

CUT from a large sheet of coarse brown paper, a piece two inches larger than the quilt each way. Lay this over the quilt and then push down the cap, or upper story, and all the upper ventilation is closed completely, *as we want it*, in spring as soon as the bees are on their summer stands.

PROBLEMS.

NO. 5. Can no way be devised to get the bees from a strong colony away from their combs without shaking and brushing them off with a bundle of asparagus tops, etc. For instance we have accomplished something this way:

Take a strong colony in the dollar hive and raise it from the bottom board enough to allow a similar hive full of combs just extracted to be placed under it, and the greater part of the bees will be found in a few minutes on the lower combs attracted by the honey spread about on the uncapped cells, and their desire to clean up everything tidy. Now remove your upper combs and you have but few bees in the way, and these combs when extracted can be used similarly for the next hive and so on. Now if by some stratagem we could coax *all the bees* below quietly, wouldn't it be jolly?

No. 6. One of our subscribers raises *moth worms* all he can, uses all his pieces of comb and old broken hives for the purpose, yet is troubled no more than formerly with "Millers." (Which we don't doubt at all). Who can guess why he raises them? "Answer next month." P. S. He don't eat 'em as they do snails in some countries, so don't guess that.

No. 7. Sawdust around the hive to keep down the weeds and to keep the bees from crawling under the hive when we extract, is liable to catch fire when we are obliged to smoke them. Is there any thing else as cheap and effective that won't burn? "Scientific" makes the query and we second it.

◆

HONEY COLUMN.

I HAVE 400 lbs. of the purest Linn honey to sell at 18c. wholesale. Thomas Hare, Marion, Linnn Co., Iowa.

L. Beckwith, Berlin, Wis., says; "I am not satisfied that it is best to run all in extracted honey. I understand that it has been slow of sale in Chicago at 8 to 10c., and hard to sell in Milwaukee at all—can sell a few lbs. at home for 12 to 15c. in trade, when good light comb honey is wanted at good prices, therefore I want the best way to average 100 lbs. of box honey, in a good season, per swarm. With sure and ready sale for extracted honey at two-thirds price of box honey, I should of course run entirely on extracted."

We think Mr. B. quite modest in only wanting 100 lbs. box honey per colony; *we* should not dare promise so much extracted; and that reminds us of a prominent bee keeper who writes, that it's no trouble to make boxes, for he sells them by the lb. for a good deal more than they cost. Now in Medina they always wish to return the box, and when we object they reply: "Want us to pay 30c. per lb. for all that wood and glass? No sir 'ee! take back the box honey and give us the pure stuff in the glass jars for 20c." We presume it will take a *little longer* for people to get *weaned* from "beeswax honey," than it did a few years ago from "tallow candles."

F. F. Nunn, Peru, O., has 2 bbls. nice candied honey; wants 20c. for it.

◆

SOMEBODY advertises *rubber gloves* for bee-keepers, for no other reason that we know of unless it is because they "want to sell 'em;" for any bee-keeper who has tried them very well knows how much "worse than nothing" they are.

◆

☞ Get Oats and Rye ground together for feeding, soon as bees can fly. *Have it ground fine.*

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advance: and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

ITALIAN QUEEN BEES FOR 1873—Will be bred from Imported Mothers, one of which is one of Charles Dadant's importation. Persons who purchase Queens of me will get what they bargain for. Send for circular. WM. W. CARY.
COLERAIN, Franklin Co., Mass, 2 7

PRICE LIST OF PURE ITALIAN Queens and Bees from Shaw & Daniel's Apiaries, for 1873:

For last year's Queens, sent as early as the weather is suitable, $5 each.

Tested Queens, during the season, $4 each.

Untested Queens in June and July, $3 each. After the 1st of August, $2.50. All Queens sent by mail warranted pure and fertile. Safe arrival guaranteed.

Nucleus' Hives containing pure Queen, with 6 frames each, 8½ by 9½, $8 each. Can be built up into strong swarms or used for wintering surplus Queens.

Full colonies in one story Langstroth Hives, ten frames each, $13. Wide hives with movable partition board from 14 to 17 frames each, $15. Two story hives containing 21 frames, $15 each.

American Hives, containing 9 frames with space between top bars, $15 each.

Each colony will contain a young Queen and 9 frames of comb, with extra frames. Sent by express and safe arrival guaranteed.

Address 1tf
J. SHAW & SON, Chatham Center,
or J. E. DANIELS, Lodi, Medina, Co., O.

ALSIKE CLOVER SEED.—A nice article; 50 cents per pound by mail or 35 cents by express. A. I. ROOT & CO., Medina, Ohio.

ITALIAN BEES.—We offer for sale about 200 colonies of Italian Bees in the American Movable-Comb Hive. Also Queens throughout the season. Purity and safe arrival guaranteed. For further particulars, prices, &c., send for circular.
BALDWIN BROS.,
2-9 Sandusky, N. Y.

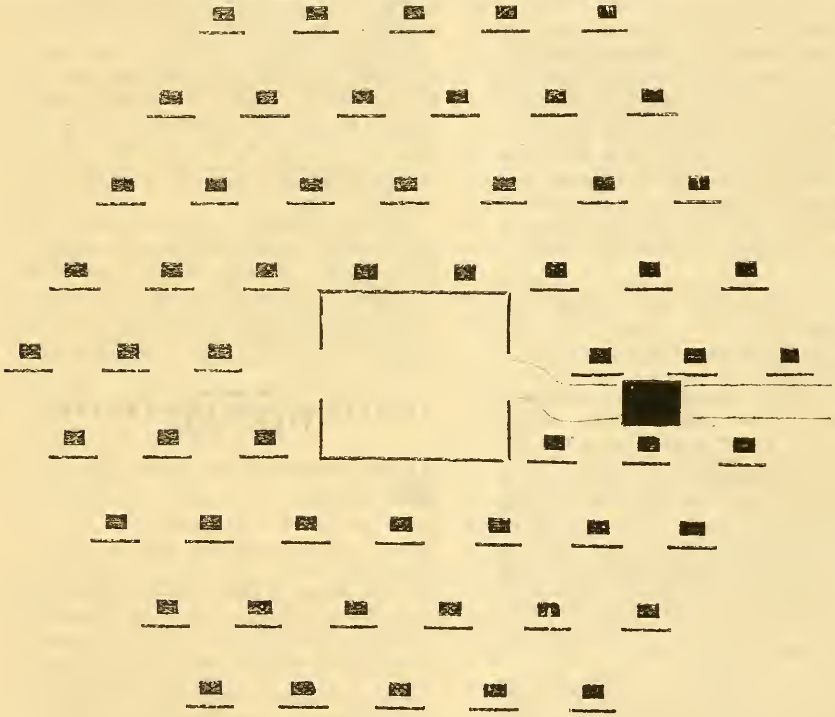
CHOICE ITALIAN QUEES for 1873.—I have increased facilities for rearing Italian Queens for the coming season. The choicest Queen-Mothers to breed from, and no black bees to interfere. Send stamp for circular to W. J. DAVIS, Youngstown, Warren Co., Pa.

"NOVICE'S" Gleanings IN Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., APRIL 1, 1873. No. 4.



ARRANGEMENT OF THE APIARY.

(We should add Designed and Engraved by "NOVICE," but "P. G." says it wasn't engraved for "he did it with a saw." P. S.—*Saws* are Novice's last hobby.)

STARTING AN APIARY.

No 1.

NOW for business. In the above illustration which is drawn on a scale of one inch to twelve feet, the house is represented in the center, with the hives and grape-vine trellises arranged about it in the form of a hexagon, as given in our first paper, only that the above shows an apiary at a stage in which it contains only 56 colonies.

The building has a door three feet in width, at *each end*, to facilitate as far as we can the operation of extracting, for the arrangement of the hives permits the greatest amount of room possible and at the same time allows us to take almost a bee line from any hive to either of the doors, and yet those most remote are but 24 feet distant.

Just as soon as this number is received we hope each one of you will provide a nice clean load of fresh sawdust even if it costs $2.00 as it does sometimes here in Medina.

Get the children to help (the more the

merrier,) and bring all the dust pans and fire shovels, carts, wheelbarrows, etc., and proceed to lay out the walks of our city; for we shall expect you to go around among your hives all kinds of weather, and without getting your feet muddy to be tracked indoors either.

If your supply of sawdust is limited make narrow paths with it, midway between the stakes in the three different directions in which our lanes run. We sincerely hope that the wives, mothers and daughters of your household are partners in this enterprise, because they will assist so much, in keeping it neat and tidy, and when they once become interested in its growth and development, (for it may commence with only half a dozen hives, three, two or even one only,) we are sure it will succeed.

We think it will pay to build a Bee or Honey house when you have a dozen colonies, and the rail road when that number is doubled. The building is 10½x12 feet, outside measure, and as the walls are one foot thick, packed with sawdust, the inside is one foot less each way and eight feet from floor to ceiling. The floor is elevated ten inches from the ground and is also packed with sawdust and the building is supported on a good stone or brick wall laid with mortar.

The whole of the timber used is 2x12 inch joists sided up on the outside and made tight (so that no sawdust can sift through into our honey,) by matched lumber on the inside.

As with our hives, any lumber will answer that contains no loose knots. Tight fitting, double doors are used, and the inner ones are so hinged that they can be slipped off and deposited in the loft out of the way in summer time when the building is used as a honey house; the outer doors should each have a window sash in them covered with wire cloth externally, and these sashes should be allowed also to slide down in hot weather, leaving the wire cloth to keep bees out; also have the doors arranged to fasten open as well as shut.

In the center of the floor an opening one foot square is made through both floors for ventilation, and also one of the same size in the ceiling above, reaching into the open air, but so arranged that no ray of light can enter; both of these openings should be *painted black* inside, and the lower one should have a nicely fitting trap door which may be opened more or less according to the number of colonies the room contains, or the severity of the weather. For wintering, six shelves, each twenty inches broad, are placed at equal distances on each side of the room, three inches from the wall; the hives are placed on these without top or bottom, and the frames covered with the cloth quilt only. The shelves are removable and are stored in the loft in summer except a part of one of them on the south side, which is a fixture and contains shallow drawers.

Remember that neither the house nor apiary is ever to be lumbered up with useless traps, even if they have to be burned up periodically, and so we make no provision for storing them.

The house as described is sufficiently large for storing one hundred colonies in winter, (if they are in the dollar hive,) and will admit of all necessary operations in summer, unless we should be so unfortunate as to get a barrel of honey from each colony, and even then it might be carted away every night.

Our railroad is simply a track made of pieces of scantling 2x3 inches with boards nailed across on the under side, and the car is a shallow dry goods box, bottom up, with a post nailed in each corner; these posts have mortises in their lower ends to slip over two axles of one inch round iron, having cast iron truck wheels fastened stationarily to their outer ends.

The top of the car is 2½x4 feet and raised enough to be level with the floor of the house; the other end of the track is such that the platform of the car is about level with the bottom of a lumber wagon; thus, hives, honey, sugar, etc., may be quietly and speedily conveyed to or from the building.

“Presiding Genius,” says a collision is sure to result between the car and and the hive near it, with the curved track we have made in the drawing, but as we cannot consent to mar the symmetry of our “honey comb” apiary by removing the hive a little, the whole thing has gone to press as it is.

ITALIAN QUEENS FOR TWENTY-FIVE CENTS.

KIND readers, Novice hasn't gone wild or crazy, nor into a *gift enterprise* even (which, in our opinion, would be worse), but after having made it plain that the “dollar” hive was feasible, the fact that we *must have* Italians occurred to us, and also that many of us have invested much money, and, in some cases, with but little profit or satisfaction in return. We, too, have had our share of humiliating results in trying to Italianize, and must confess, therefore, that we have a preference for eggs for queen rearing *directly* from a *genuine* imported queen, and have no doubt that bee-keepers in general feel the same way.

On pages 209 and 210 of the *National Bee Journal*, Vol. II., we find that eggs can be sent safely by mail. Many thanks to friends Murphy and Marvin for the facts furnished; and now we want the assistance of all queen rearers having imported queens. We will advertise *gratis* the names of all responsible persons who will undertake to aid our friends, as follows:

“On the receipt of 25c. we will mail to any address a piece of comb containing freshly laid eggs from an imported Italian queen.”

A piece of comb 2½x3 inches should

AGRICU COL

contain from two to three hundred eggs, and this can be placed in a suitable frame of comb when received, and hive and all substituted for one containing a strong colony. When the eggs are hatched, if desired, the comb of larvae can be still further divided, and thus a large number of queens be reared and the risky process of "introduction" avoided entirely.

To those of our friends that furnish these eggs for hatching who fear "it won't pay," we will say: You have no trouble in queen rearing to contend with; by liberal feeding eggs can always be secured in the centre of the colony; postage is but two cents if the comb is fixed in a stiff pasteboard, bent up in such a manner that the postmaster can examine the contents if he wishes; and lastly, if eggs are from an imported queen, no guaranty of purity is needed, and for the small sum of 25c. none will be expected for safe delivery, etc.

Drone eggs can be at the proper season furnished at same price, if wanted, but our impression is that daughters of an imported queen are as honey producers *good enough*. As to whom we shall patronize, our advice is that for both queens and eggs, as a general thing, it is best to *trade nearest home*, and with some one we know will do as nearly right as he can.

We will assist in the enterprise all we can, and as we have none nearer than an imported queen's daughter, we shall, if possible, procure an imported queen in time to mail eggs in May.

If we fail in this, those who send to us will have to take the best eggs we can furnish.

◆

PROBLEMS.

NO. 8.—It is well known that market gardeners make use of sashes of glass to forward such vegetables as they require very early. Now as it is *very desirable* to induce brood-rearing largely this month, and as warmth is one great essential, can we not allow the sun to strike the quilt by raising the cover partially, and at the same time keeping off cold air by a sheet of glass raised at an angle of 45 degrees, or laid over the quilt simply? Which would be the better way, and would not a quilt made of *black* cloth give us better results? A reply from some one who has had experience in market gardening would be quite a favor.

No. 9.—How long can eggs be kept away from the bees and still hatch, and if temperature affects the result, what temperature is most favorable? [See article on another page.]

ANSWER TO PROBLEM 6.

The fact is that I am a devoted disciple of that great and good man and eminent naturalist, the late Izaak Walton, and I long ago discovered that for all kinds and descriptions of fish that will take a grub or fly, from the trout and black bass down to the river and pond sunfish, the larvae of the bee moth is just about the most attractive bait that can be used. It is a very cleanly bait, and has a strong odor of its own, as of course you know, which I suppose is one of its advantages. I believe that nothing was made in vain, everything has its use if we could only find it out, but I never heard of any one being able to put the bee moth (no pun intended here) in harness, or derive any benefit from it, until I tried it myself. I have, of course, noted some of their habits, such as their propogating in confinement, the diseases to which they are subject, and that combs hung in the open air, that is, not in a hive, at a distance of 1 or 1½ inches apart, are almost secure from their depredations. In this case the moth will sometimes attack one, and it the worms cannot reach the next one they will confine themselves to the one on which the egg was laid until they are done feeding, when they will begin to travel, &c.

ANSWER TO PROBLEM 7.

Do you think there is any objection to using tanbark around the hives? I have always used it and find it very good to keep weeds down, and it will not catch fire very easy. C. E. W.

It is our impression that the above will answer excellently, but what are unfortunates like ourselves to do that can't get any, nearer than ten miles?

◆

HONEY COLUMN.

I HAVE a 12 gallon cask of dark extracted honey (mostly buckwheat), that I will sell at 12½c. with cask thrown in. A neighbor has a same sized cask of white honey (clover and basswood) that he will sell cheap, and also 80 pounds of dark honey.
J. F. MOORE,
Binghamton, N. Y.

I have but little extracted honey on hand now, but would like to engage my next crop. I shall have, if prospered as usual, about 3000 lbs., which I will deliver free of cost on the cars or steamboat, at Muscatine, Iowa, in 150 or 200 pound oak kegs, at 15c. per pound, kegs thrown in. The honey I guarantee all to be a No. 1 article. I have been selling extracted honey for four years, and know what it should be.
W. J. RONALD,
Grandview, Iowa.

◆

WE have never seen a case of foul brood and consequently can't advise in the matter; but we *do* recommend that as a precaution the utmost care be exercised in shipping queens or eggs from an apiary where it prevails or has prevailed. Perhaps the matter when we become familiar with it can be shorn of some of its terrors, like moth millers, etc.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, April 1, 1873.

All money sent us without specifying definitely for what purpose, will be credited on "Gleanings," and the paper will be sent just so long as it is paid for *and no longer*. We hope our friends will excuse us for making this our invariable rule to all.

◆

In case the locality of any hive is to be changed after the bees are flying in the spring, do it by moving, not to exceed one foot at a time. If moved otherwise, unless the distance exceed one mile, the colony is frequently injured for the season.

◆

The different No's. of "Gleanings" are so intimately connected and follow each other in such a manner, that we hope our friends will excuse us for insisting on having all subscriptions commence with the first of each year. Of course we shall always be prepared to furnish back numbers.

◆

We have received from Dr. Jewel Davis, of Charlestown, Ill., a queen nursery, and judging from what experience we have had with a simular one of our own make, we think it without doubt quite valuable in an apiary. As he now offers them for four dollars, right included, we cannot call the price unreasonable. The fifteen movable queen cages contained in one frame are nearly worth the price alone, but we are somewhat doubtful as to the expediency of keeping your queens in confinement very long after they have been hatched. We want the most prolific and longest lived queens that can be had, and if unrestrained liberty of the hive and "all out doors" too, is one of the essentials, "let 'em slide" by all means. Will some of our large queen raisers give us their opinion on the subject.

Some one suggests that we make "Gleanings" a "Weekly" which we might easily do if we should publish all the expressions of approval that we receive in regard to its value thus far; but as we expect you to *receive* more money from your bees than you *expend*, we have serious doubts as to whether a weekly would be prudent. Success is only achieved by hard work, and books are only to assist you in directing your work. Doubtless the money can be better invested somewhere in the Apiary.

◆

It seems we have been so unfortunate in making ourselves understood, that several have written us asking the price of "individual rights" for the *privilege of using* the metal corners, which is quite a joke on Novice, certainly. Of course every one is free to use them if they wish, and so far as we are concerned, to make them or any modification of them they please for *their own use*. We only reserve the privilege of manufacturing them for sale as all valuable patented articles are sold, and as they are furnished at a price but very little in advance of the cost of making, we presume no one will accuse us of charging an extra price for them because they are patented.

◆

From the March number of *Bee Keeper's Magazine* we infer that Mr. King has at length given up selling "rights" or trying to sell them. If this is the case we presume the lesser "patent hive men" the world over will also drop the business, and accordingly "my hive" and the "deed of individual right to make and use" has all gone down, too, as it could not help doing when the world became enlightened. Factories for making desirable hives at a price below what they can be made at home, will be an excellent thing, and there can be no objection to having them patented, providing they are sold to *any one* or to go *any where* at one common price. "Novice" commenced to ask all bee keepers of America to swing their hats and give three rousing cheers for freedom from the thralldom of "patent hives," when it occurred to him that no intelligent bee keeper would use any of the patented hives that have been paraded over our country, were they now laid at his feet as a free gift, (always excepting the "movable frame" feature,) so he stands hat in hand and "don't swing it nor cheer either." We may be in error for Mr. King talks about "trade marks," but the result is inevitable in the end.

HEADS OF GRAIN FROM DIFFERENT FIELDS.

THESE WILL BE NUMBERED HEREAFTER TO FACILITATE REFERENCE.

NO. 42.—Please let us know something about shipping bees; how far could they be sent, probable cost, etc.

R. S. BECKTILL, Madison, Wis.

We believe that bees *can be* shipped almost any distance, but do not think it advisable to undertake very long shipments when it can be avoided. As they must be sent by express, it is necessarily quite expensive; perhaps $2.00 or $2.50 would be the charge on a hive of bees from New York to Chicago, as an illustration. As a general rule we think it best to trade as near home as may be, either in hives, bees, queens or extractors, unless it may be for a choice imported queen, or for samples of implements; and some good mechanic in every neighborhood should make it his business to furnish hives, extractors, etc., *unpatented*, and thus save expensive freight bills and also allow the purchaser to examine his goods before buying.

No. 43.—Some five or six years ago I read with much interest in the *American Bee Journal* the account of the *astonishing* yield of over 300 pounds of honey from *one* swarm of bees in one season. At that time I had but small experience in bee cultivation, and although my theories and enthusiasm had led me to expect liberal proceeds, still that amount quite came up to my most sanguine hopes. Not being, as I think, in as good a location, and also for want of time to give the attention required, I have never, as yet, gone over about 200 pounds. But I think I could, with proper attention in a good location, go as high as "any other body." Year before last I obtained 2200 bbs. from about 40 hives. Last season was not near as good, and besides my bees came out in the spring in very bad order; so I said I would never carry my bees into the cellar again. So I have been trying the experiment of out-door wintering, without protection, and two days ago I became so fearful that all would be dead before spring that I hurried what were alive into the cellar again, making up my mind decidedly that in this climate, out-door without protection is very unsafe.

S. L. RICHARDSON.

Webster City, Iowa, Jan. 21, 1873.

We have been obliged to come to the same conclusion with Mr. R. in regard to out-door wintering.

No. 44.—I am tired of buying rights. Have you borage seed and the Rocky Mountain bee plant?

Who isn't tired of "rights?" There's plenty of borage at the seed stores. We don't know about the other.

No. 45.—Your advocation of the exclusive use of the extractor, I must acknowledge to a non-conviction of its profits. I was offered last summer, in Chicago, 5c. per lb. That is the reason I run most of my bees last summer for box honey.

FRED'K CRATHORNE, Bethlehem, Iowa.

See pages 5, 23 and 24 of "Gleanings," and the following:

No. 46.—Don't you think you can afford to turn some of your surplus energy towards the production of box honey? We think, in view of the slow sale of extracted honey especially in our Eastern markets, that some of the bee-keeping geniuses should turn their attention to producing box honey, so as to simplify it, and make it more certain. It is easy to learn to raise bees, increase stock, and extract the honey; it is only a matter of unremitting labor, of persevering industry, and don't require a very great amount of hard work. In fact, we think you *will* be a Novice until you can get so you can put any good stock of bees into boxes and keep them there through the season, and have them store the majority of their surplus in comb, without attempting to swarm, and without a very great amount of trouble. That is the problem, and when you get so you can do that, you will begin to understand the science of bee-keeping. Not but what you have done much already (for we have much to thank you for,) but we would very much like you to try and do as much for the box honey producers as you have already done for the producers of extracted honey for this reason: There is a class of consumers (and they are the class who buy the most of the honey, especially in these Eastern cities,) who will have comb honey, at whatever price. Take the New York quotations, for instance. While box honey is quoted at from 32 to 35 cts., the highest quotation for extracted is 15 cts. Extracted is offered in a great many places in this city, but it is a drug. There is scarcely any sale for it, because the market is supplied with comb honey. A great many customers buy comb honey purely for its looks, because it sets out a table, and would not buy it for any other purpose; and then they claim that the flavor is superior, which we think you must admit. It is very true that when it is first extracted it has a peculiar fresh flavor; but it is always extracted at a time of year when there is no sale. Eastern dealers don't deal in extracted honey until about November; then your extracted honey soon begins to candy and lose its fresh flavor, and sales stop. Now we claim (although we have no statistics to go by, and don't know as there are any statistics that can be got at,) that nine-tenths of all the honey produced in the United States and sold for table use, is comb honey. If we are wrong,

please correct us. We think (notwithstanding that the extractor is a great invention) that the majority of the honey will be sold in the comb for a great many years to come. Hoping you will excuse this long communication, and will think the matter over favorably, I remain as ever your friend, J. P. MOORE,
Binghamton, N. Y.

A perusal of the above leaves us just about in the condition we were the first time we ever attempted to speak at a debating society, viz: we could only think of one idea, and some one who pitied us called it a heavy one, as we hope the following one is: Get thin white-wood veneer and make frames by folding up strips about 1¼ or 1½ inch wide; these frames to be of such size that four or six would fill a large frame. When these are filled with honey and sealed up they can be removed and sold singly or in boxes. As the frames can be made for ¼ cent each or less, they can be sold honey and all. The veneer can be purchased very cheaply.

No. 47.—Does Mellilot clover blossom the season it is sown? Is Sweet Mignonette a good honey producer, and can it be profitably raised by the acre—that is, will it pay? To make bee-keeping pay any and *every* year, it needs other flowers than white or alsike clover or basswood. There is hardly a year that all blossoms yield honey, and to have only clover and basswood for honey producing is like some of the Southern States planting only *cotton* to make money from. We need more honey producing plants, and if there are any that will pay to cultivate it will be a step forward, &c., &c. I think you must see what I am after. Can anything be done? Can the seed of Sweet Mignonette be had in sufficient quantity to plant an acre? J. L. THOMSON,
Big Tree Corners, N. Y.

Mellilot does not blossom until second season, and with us, bees pay but little attention to it. We find it one of the worst weeds to "dig up" it has ever been our fortune to encounter, and cannot see that it differs materially from common sweet clover.. B. H. Stair & Co., 115 Ontario st., Cleveland, O., can furnish any quantity of Mignonette seed, but we must think such experiments risky, for nothing short of *acres* of any plant would give a definite result. If we select some plant that will pay otherwise than as a honey plant, we can go to work much more safely. For instance, large yields of honey are obtained in Germany from the rape fields; in some cases the honey has been known to run out of the hives in the evening, so great is the yield. We give below a letter from Messrs. Stair & Co., rec'd Feb. 20th:

"We have heard summer rape very favorably spoken of as a honey plant. We wish you would agitate that subject in "Gleanings," and if it is worth while we will give you modes of culture. We will also buy the seed product up to 40 or 50 bu. if any one wishes to try it."

If a sufficient number care for the matter, we will give the further particulars in our next.

No. 48.—I have received nearly four thousand lbs. box honey, and five or six hundred lbs liquid honey from seventy-two stocks, with which I commenced last spring; besides increasing my stock to one hundred and twenty, an increase of forty-eight. I expect to realize thirty-five cents per pound for box honey above expenses of shipping, commission, &c. It is being sold now in the New York market at forty cents per pound, wholesale. I am very sorry you have no better success in getting box honey, usually I get about one-half as much weight with boxes as with the extractor; and box honey is worth about twice as much as the extracted. This year I have done better than this, getting nearly as much cap honey as extracted.
JAMES E. CRANE, Bridgeport, Vt.

Our friend certainly should be satisfied with the prosperity of his apiary, and his last item seems to favor Gen. Adair's position, viz: "That it *is possible* for them to build comb to contain the honey as fast as it is stored, when every thing is most favorable for such results." Our experience has been quite different, for we have many times observed that the amount of honey taken with the extractor is seldom anything near what *might have been* obtained had it been used always as soon as the bees had filled (and partly sealed) their combs, and before they began to contemplate swarming. However give us the facts on both sides by all means.

No. 49.—Mr. Davis is rather ashamed that he cannot make a better report of swarms and suplus honey. But the fact is Mr. Davis was taken by surprise. He had calculated the fire had nearly destroyed his apiarian prospects by burning out by the roots every tree and bush in this large swamp, some 1200 acres: and was not prepared for such wholesale swarming, commencing in May and lasting until September. Several went off, for which I was thankful, for I had my hay and grain to take care of, and they came too thick and fast,—seven or eight in a day and no hives made you see. Old refuse combs that set leaning against the hives would be filled, all the boxes that I could get a chance to put on and some of the caps were filled: some of them built comb in the portico, filling with honey as they went along *right out into the "cold world."* After all the old hives, boxes, and hollow logs were filled, I drove down four stakes, nailed on a couple of strips and hung on some frames; then I put 3 or 4 swarms that went together on the frames; in the fall we had a barrel of honey and comb. About the middle of September the bees quit business, but I expect they are getting ready to try the thing over again. The plant is called here *cockle*, and grew six feet high in some places and covering the entire swamp, the bees worked on it all day. My bees had about 7000 lbs. of honey in their hives and not more than 500 in boxes. J. L. Davis, Delhi, Mich.

P. S. We got considerable slung honey but kept no account of it.

We don't know how much Mr. Davis' "hay and grain" were worth, but it strikes us we should have let it "slid," "cause we hadn't time to 'tend it," but we should have taken care of the honey and then bought the "hay and grain" of some one that didn't know any better than to *waste their time* raising it. Two years ago we received over $1000 cash for our honey and a neighbor who had an equal number of stocks and an extractor too, received less than $100. When asked why he had no more he replied his farm kept him so busy that he *could not take care of his bees*; and yet his whole product of the farm for the year was worth less than *half the value of the honey* he allowed to waste, and such cases are common.

No. 50.—How do you prevent a queen from laying too many drone eggs, and is there such a thing as a good fumigator.

I. J. Kennedy, Castalia Springs, Tenn.

Cut out all drone comb and fit it in a frame by itself for use in the upper story; now to prevent *more* drone comb from being built, fill the vacancy with worker comb and keep none but worker combs in the brood apartment. We have tried fumigators, tobacco, pans of sawdust, rolls of rags, etc., etc., but we find a chunk of hard, rotten wood and a coal of fire from the kitchen stove more effectual and less trouble than anything else. Provide a sheet iron box in some convenient place, to keep it in; this will shelter it from rain, and if you are careless in not putting all the fire out no damage will be done.

No. 51.—Please hang crape on the knob of your bee house door in respect to 7 swarms of your correspondents bees which have "gone up," "gin out" or "friz." Also tell your photographer to get ready to take a picture of the longest faced bee keeper, or rather bee looser in Medina county, (them's me). It is not strange that they died as the thermometer varied 44° in 24 hours; going as low as 19° below zero. O, for a bee house.

Seth Lucas, Remson Corners, O.

But friend L. bee houses don't always save them either, though we think them a very important item in the business. We shall be very happy to include you, as we want "all sides to the picture" when we have our apiary photographed next June.

No. 52.—Dear Novice:—As you have about quit making blunders, I didn't know but you might pay a premium on a few first class ones, so I send you one of mine, for I am quite ingenious in that direction. Last summer I had quite a number of empty combs and as I was obliged to leave home the last of July for a long time, I thought I would leave them where the bees would protect them from the bee moth. So I put a second story on all my hives and filled up with empty combs. When I examined them in the fall those which were strong had stored some surplus, but those which were weak, some of them being the latest swarms made, had the second story a solid mass of cocoons and webs. Two or three hives full of empty comb, that had no protection, but stood in the sun with the entrance open to the moth, were not disturbed at all. Moral.—To destroy combs, protect them *weakly* by bees. In one of the above cases I placed a second story on a hive, with an inch board having a two inch auger hole through it between the two stories. In the fall I found the lower story filled with honey and the brood nest and bees in the upper; which hardly goes to show that the queen prefers to keep the brood below in all cases.

C. C. Miller, Marengo, Ill.

We are really afraid friend M. wasted his time worse than Mr. Davis did in taking care of his hay and grain.

No. 53.—We are all very much pleased with your "Gleanings," and feel that they are to "turn over a new leaf" in bee culture; by which the business will be simplified, popularized and made interesting, fashionable and profitable; besides being much sweeter than ever. I hope you may be able to interest the ladies generally in the pursuit; in order to call them more out of doors, and make them more interesting and healthy. It would do very much in the way of abolishing long doctor bills. J. H. Salisbury, M. D.,

Cleveland, O.

As the above comes from one of the first physicians of the present age, we feel considerably encouraged thereby. Besides being able to contribute to the work of opening up a new branch of industry, the fact that we can also aid in elevating the standard health of our American women will be an additional stimulus. When a physician tells us that the necessity of long "doctors bills" may be avoided, we begin to have faith.

No. 51.—We went into winter with nineteen stocks, most of which had stores sufficient to carry them through the winter, but mostly weak in numbers. I united a few of the weakest. That was late in the fall. Not thinking anything serious would happen, I gave them but little attention until near Christmas. Upon examination I found four stocks dead. The bees looked as though water had been poured on them. Their combs were badly soiled and very damp. What was the cause of their death I cannot tell. It was not for the want of stores, for they had honey sufficient, and they had not been confined to the hive more than two weeks. Some had ventilation and others none. All fared alike in that particular. But we pass to the next cold spell and the same happens to others, until I have but nine left, and many of my neighbors have fared the same way. Now, the latter part of last season was the poorest that I have ever known in this country. The bees worked almost exclusively on fruit during the latter part of summer and fall. It is said by old bee-keepers in this section that when fruit is plenty bees winter badly. I believe that their appetite for it proves their destruction, of which any one can satisfy themselves by going to an orchard when bees are working on fruit late in the fall. When the evenings are cool great numbers of them may be seen so heavily loaded that they cannot fly. But do they store cider for winter? and if so, what effect does it have on the bees?

H. PEDEN, Mitchellville, Tenn.

Opinions conflict in regard to the effect fruit and cider mills have on bees in this locality. Last fall our bees worked strongly to and from a cider mill within an eighth of a mile, and stored some beautiful clear honey that tasted like apple molasses. This they gathered so late that we found it almost impossible to keep them from adding it to their winter stores of syrup, and many of our colonies show symptoms of dysentery now. Those that were deprived entirely of their combs and a new set given them instead, filled and sealed by other colonies kept constantly employed in that way, are in as perfect order in every respect as we could wish. We now have great hopes that sugar candy will answer all purposes of sealed syrup, and will also be the most convenient way in which we can give them an unlimited supply. See Problem 1st.

WE have before us three numbers of *Apiculturist*, published by G. W. Church, Mexico, Mo. The first is headed Vol. 1, No. 2, April, 1870; the second, Vol. 2, No. 1, July, 1870, and the third came to hand the last of February of the present year, dated Jan., 1873, *Vol. four*, No. 1. As *typographical errors* are "quite plenty" all through *Apiculturist*, perhaps the above is only that, and not the intention of making it appear something more than it really is. We do hope the custom of "sailing under false colors," so common with "bee hive men" may not be adopted in Bee Journals. When the disposition is seen, whether in "Gleanings" or elsewhere, we hope it may be shown up at once and without mercy. Whenever it can be shown that *Apiculturist* is *really* in its *fourth* volume we shall be most happy to so announce it. Terms $1.00 per year.

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

WANTED.—300 hives of bees to be used as nurses in rearing Italian Queens.
Address, R. WILKIN,
Cadiz, Harrison county, Ohio.

PRICE LIST OF PURE ITALIAN Queens and Bees from Shaw & Daniel's Apiaries, for 1873:

For last year's Queens, sent as early as the weather is suitable, $5 each.

Tested Queens, during the season, $4 each.

Untested Queens in June and July, $3 each. After the 1st of August, $2.50. All Queens sent by mail warranted pure and fertile. Safe arrival guaranteed.

Nucleus' Hives containing pure Queen, with 6 frames each, 8½ by 9½, $8 each. Can be built up into strong swarms or used for wintering surplus Queens.

Full colonies in one story Langstroth Hives, ten frames each, $13. Wide hives with movable partition board from 14 to 17 frames each, $15, Two story hives containing 21 frames, $15 each.

American Hives, containing 9 frames with space between top bars, $15 each.

Each colony will contain a young Queen and 9 frames of comb, with extra frames. Sent by express and safe arrival guaranteed.

Address 1tf

J. SHAW & SON, Chatham Center,
or J. E. DANIELS, Lodi, Medina, Co., O.

ALSIKE CLOVER SEED.—A nice article; 50 cents per pound by mail or 35 cents by express. A. I. ROOT & CO., Medina, Ohio.

ITALIAN BEES.—We offer for sale about 200 colonies of Italian Bees in the American Movable-Comb Hive. Also Queens throughout the season. Purity and safe arrival guaranteed. For further particulars, prices, &c., send for circular.

BALDWIN BROS.,
2-9 Sandusky, N. Y.

CHOICE ITALIAN QUEES for 1873.—I have increased facilities for rearing Italian Queens for the coming season. The choicest Queen-Mothers to breed from, and no black bees to interfere. Send stamp for circular to W. J. DAVIS, Youngstown, Warren Co., Pa.

"NOVICE'S" Gleanings in Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

Vol. I. MEDINA, O., MAY 1, 1873. No. 5.

STARTING AN APIARY.

No. 5.

WE hope our readers will not object to the following, simply because they have always been taught differently, for we assure them that all we here recommend we have carefully tested.

The entrances to all the hives, in our plan of apiary, should front either east or west, and for several reasons we prefer the former; also, as we wish to avoid all unnecessary complication and simply aim to derive the "most money with least outlay, labor," etc., we will discard numbering, and treat all hives precisely alike, and *make* them all as nearly alike as possible. In short, our aim should be to make each hive constitute such a part of the whole Apiary as each individual bee does part of the whole colony of bees.

Now, the true test of skill in an apiarist is the ability to make an apairy of a considerable number of hives yield an average of a fair amount of honey per colony; the simple fact that one hive gave two or even three hundred pounds, proves but little, for many others may have given little or none, and the general average may not have exceeded 25 lbs.

As a colony will labor as well on any other set of combs and brood as their own, we will, when we commence extracting, remove the entire set of combs of each hive forward to the one next it at each operation, thus facilitating our work and equalizing our colonies, at *the same time*. Of course to do this all combs must fit perfectly any where: if they do not, they must be made to, *at once*, as well as hives, covers, and everything else. In transfering (and this is the month for it with most of our readers,) take one comb each from several hives for the transferred bees to cluster on, and as soon as a frame is filled with comb give this to a hive from which one comb was taken, and we have very little danger of combs tumbling down, for the transferred combs are distributed about, one in each hive; and the transferred bees have all good combs and accordingly are strong, and an old colony at once. In all operations we are to bear in mind as above, that no one colony is to be called upon to furnish bees, brood, or combs, alone, but that all, or many, are to each bear a share of the work. *Swarming* is not to be allowed at all, but if increase is desired, at least ten colonies are to build a comb each: others are to furnish bees, and still others, a queen. Young bees that cannot fly must have employment besides caring for the brood when hives are populous, we therefore make it a rule that each colony has at least one frame unfilled with comb whenever honey is being gathered, as well as *empty* comb at all times.

The great facility offered for moving the combs about, in the hive we have advised, is very apt to induce "putting an empty comb between two brood combs," being over done, especially quite early in the season, and we would caution our readers against spreading the cluster of bees and brood in this way too far, or they may get a severe check in brood-rearing from unseasonable weather; but *judicious* spreading of the combs may be so done as to oblige the queen to fill nearly a whole comb entirely with eggs, and as these eggs hatch nearly at the same time, the nursing bees can feed and attend to them systematically, without skipping about as they usually do for brood that needs care. Sealing over and hatching-out also occur on the "one job" system, the cells are ready for eggs once more, which can be laid by the queen as methodically as we would plant a field of corn. When a hive has once got into the way of raising brood in this manner it will probably continue thus the whole season, and the "golden showers" of young bees that such a "mathematically disposed" queen can send to the fields for "loads," are truly astonishing.

In our last we omitted to state that our bee house should be so arranged that a surplus of sawdust kept in the loft could be at any time pushed over between the upright joists to fill up the space caused by the settling which occurs as it dries out; also, a small door over one of the large ones gives access to the loft by means of a light ladder.——P. S.—Don't leave the ladder up Saturday nights for the children might climb up and play in the sawdust on the Sabbath.

"But, Mr. Novice, you haven't considered 'box-honey' at all, yet."

"Why, yes we have; see Jan. No. page 5. When we get our hives full of brood and young bees we are just right to put them into the hives double width and put on boxes, etc.."

"But how will you prevent swarming? Our bees always swarm, or generally do when their combs are filled, in spite of boxes, and in an apiary of 50 or 100 stocks clipping the queen's wings does not prevent her bees from joining in with some other swarm. You have also said that such arrangements as *Quinby' queen-yard* and *Mrs. Farnham's non-swarmer* would not prevent the bees from killing their queen when retained in that way."

"You are right, and we cannot think it good policy to use any means to restrain swarming that is apt to induce the bees to replace their queen. If our hives are worked for box honey, for aught we can see natural swarming *must* be allowed, and to be frank, we have as little patience with one operation as the other, for both seem to us too disorderly and wasteful to be tolerated in a well conducted apiary."

Kind readers all, our opinion in regard to the value of the Extractor may be a mistaken one, but it is honest, nevertheless. Should we presume to teach the method of securing the largest amount of *box* honey with least labor and expense, as we now do extracted, we should be attempting that in which we have, of late years, had but little *practical experience*, and so we hope to be excused; but we shall watch for and welcome anything new that may come up, and try to keep our readers posted on the subject. That extracted honey (with the market we have now for it) can be made to pay, even *poor* seasons, we haven't a doubt, and trust that the same *may be* true of box honey.

CAN OUR BEES BE IMPROVED?

WE think that any candid, reasoning individual will be perfectly satisfied that our Italian, Egyptian and native bees have descended from a common parentage, by reading an article in the *Popular Science Monthly* for May, 1872, entitled: "The Unity of the Human Species." Any bee-keeper who has any doubts on the subject will find it profitable to send to D. Appleton & Co., 549 Broadway, for the number in question, and we shall assume, in all our future writings, that the Italians are only distant relatives of our common bees, having accidentally acquired valuable qualities while closed in from the rest of their family by the encircling mountains.

The three yellow bands, then, are only an indication of the branch from which they came, and for superior honey gatherers it is much more important that we select colonies to rear queens from, that have desirable qualities *practically considered*, than that they have three or more yellow bands, or, in fact, that they have yellow bands at all; only that, at present, our best honey gatherers are yellow banded.

We will give a few facts to illustrate this, and we presume almost all intelligent and observing bee-keepers can give as many similar ones.

About three years ago we had a fine colony of cross hybrids that persisted in building little bits of comb at right angles to the main comb, and by no manner of means could we cure them of it. If they built a new comb, it was sure to be abundantly interspersed with these "fins," and on giving them a complete set of the finest comb we had, placed as near as they could be used, we found them in three days all "edgewise" again, and all we could do was to pinch off these extras every time the comb was "extracted." The next season, in that hive and no other, we found the same peculiarity, but as they were strong and industrious, we rather liked to study their idiosyncracy.

In June their queen was lost carelessly, and another substituted immediately; and strange to say, when the new workers emerged, we had sensible comb builders once more, and have had since.

Does any one doubt but that queens raised from this queen might, some of them, have shown the same trait, and that constant encouragement might have developed, in a brief time, a race of bees all having that trait developed in such direction as we chose to encourage?

Again, most bees, when shaken in front of the hive, crawl *directly in*; yet we have had two colonies that always persisted in crawling into some other place; and one of them was a "perfect bother" for a whole season, until she crawled off with a few followers and "lost herself."

When the young bees hatched from a succeeding queen in the same hive, they showed no such disposition, and as the former were dark hybrids and the latter yellow, we had the spectacle of the dark old bees crawling away, and the young yellow ones going home as "honest bees should do."

We presume Mr. Darwin would say, in both cases we have mentioned, that these sports would cure themselves unless man steps in and encourages them, for the bad comb-builders would die in bad seasons in consequence of poor economy in the use of their wax, and the "perambulating" queens, when the extractor is used, would oftenest get lost.

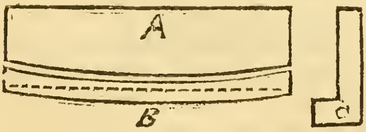
Now, fellow bee-keepers, do we not sometimes play the "mischief" by saving queens that would die naturally, and thus frustrate the order of nature by letting or *causing* some other to survive than the strongest? In selecting our queens to rear from, do we always think what desirable qualities we wish to perpetuate? We don't care for light-colored bees, unless we are sure other qualities always follow. The queen that raised our lightest and most beautiful bees was one of the poorest we ever had, and her daughter, raised from her in her third season, was almost as bad. The full banded, rather dark bees have given us most honey, and during poor seasons, like our last, those we felt sure were full-blood Italians were far ahead of hybrids.

Who has not noticed that swarms from certain hives are almost sure to go off, and others the reverse?

We think it possible, even in our brief day, to rear bees that are not *disposed* to swarm (like non-sitters among poultry, for instance); nor to sting; nor to build crooked combs; nor to crawl all over their hive or outside of it when handled; nor to get lost or do anything else undesirable; but, on the contrary, to be neat and rapid comb-builders, energetic nurses, expeditious and indefatigable honey gatherers, but not robbers, and perfectly willing to give up all their honey in the fall, and take enough sugar syrup out of a "teakettle feeder" in a couple of hours (or more) to last them all winter, so they won't have the dys-en-te-ry.

MAKING FRAMES.

AS good frames will last a lifetime it will certainly pay to take some pains in making them, and as we handle them many times each season, ever ounce of useless wood or metals should be dispensed with. Whether they are put together with nails or otherwise, if the top bar exceeds one foot in length we should make them tapering so as to give the greatest strength in the middle where it is needed. For our frames we get out strips from ⅝ lumber 18½ inches long by 9-16 in width, and these when sawed from each end until the saw cuts met in the middle gave us the proper taper, and the pieces that came off were right for the ends of the frame. We now do it much neater and quicker by sawing completely through at once; thus:



Let A represent a piece of board 18½ inches long by 3⅛, broad at each end, and 3¼ at the middle; if our strip B is held firmly against this and the straight side of A placed against the saw guage so so that the path of the saw is along the dotted line, we shall have the desired shape. To hold B in the curved position while being sawed, we nail fast to A near each end a piece like C, the broad end of course hooking over B to keep it tight up to A. A small block will also be needed nailed against the end of A to keep the strips from slipping back and another small strip nailed across the middle of A with a sharp metal point projecting in to B just sufficiently to keep it from crowding the saw, completes the arrangement. We need hardly add that the top of the buzz saw table should be elevated so far that the saw just reaches through our ⅝ stuff, to prevent sawing off our clamps C. The space between A and projections on C should just allow our strips to go in easily.

EGGS FOR HATCHING.

I AM afraid your "25 cts. queens" will ruin the trade. Don't you think you have the thing to too fine a point? I for one am willing to try it, but if I find it will not pay, reserve the privilege of stopping at any time. For 50 cents I would agree to put the comb in a *wooden* box so there would be but very little danger but what it would carry safely; would also be willing to notify customers on what day I would send it. I have a queen now, received in October last, of the "Tupper Dadant" importation.

T. G. McGAW, Lock Box 64.
MONMOUTH, Warren Co., Ill., May 1, '73.

We have in prior years sent eggs by mail, and hereby inform you that we cheerfully concede to your proposition: "To send a piece of comb with pure eggs for 25 cents." From experience we have found that a paper box, of suitable size, the cover held on with a rubber string, so the contents may be examined, is by far the best way; to ship to places where the mail is to be carried on horse-back we use a *tin* box.

As a partial answer to problem 9, I give you the following: "In June '72, we sent a piece of comb 2x3 inches to Deer Lodge, Montana Territory, for J. McDougall, (who is now breeding queens for us), from which he raised 5 queens; the comb was 6½ days in transit, and passed through territory having a temperature of from 40 to 90 degrees.

E. KRETCHMER & Co.,"
COBURG, Montgomery Co., Iowa, Apr. 7, '73

As for ourselves we have as yet been unable to obtain an imported queen, but hope to receive one in time for business.

ANOTHER STRAW.—For lady bee keepers; rubber cords or bands slipped over the drawers at the ankles, and sleeves at the wrists, are a very good protection.

0, NOWHERE.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, May 1, 1873.

We call attention to the advertisement of *Annals of Bee Culture* in this number. While we can unhesitatingly recommend Annals, we are compelled to say the theory advocated in "Progressive Bee Culture" seems to us erroneous, but hope all bee keepers who care to, will judge of the matter themselves. Gen. Adair *may* be right and we wrong.

◆

The *North American Bee Journal* for April contains some quite valuable articles on wintering. The fact of our being noticed in terms not flattering in the same number, does not hinder us from recognizing its value in general matters. If it will help our friends to read us understandingly, we will add that it was subscribers to *King's Journal* who supposed they were taking the *American Bee Journal*. If similarity of names makes no confusion elsewhere, we will drop the subject.

◆

We are making arrangements to have some photographs of our apiary taken next month, or as soon as the grape vines are fully leaved out. They will be 8x10 size, and will cost us at the rate of $25.00 per hundred, and will be mailed to such of our friends as wish them for 30 cents each; also we will mail a copy to any one sending us $1.50 for two subscribers. Those who have sent us 75 cents will therefore only need to send us one new subscriber; and those who have sent us *two*, if they will advise us of the fact, will receive the photograph as soon as out. Of course the same name can be counted but once, and only those can be counted from whom we have received the full 75 cents. They may not possess any great amount of beauty, but we trust they will aid in explaining the arrangement of our apiary and appliances.

◆

With the amount of testimony on hand in favor of sugar syrup for winter stores, we think we are excusable in considering the matter settled, at least for the present. It now only remains for us to consider how we can with the least trouble give our colonies enough sealed up in their combs to last them through the winter months. We should also be quite thankful for any facts from those who have tried candy or "loaf sugar." Mr. Quinby suggests the latter and has made some experiments with it. How can coffee sugar be made as hard and firm at small expense?

◆

Shortly after our article in the March number, wherein we mentioned the perfect capabilities of our wind mill to withstand storms, a small hurricane twisted the vane off, and then very quickly demolished the entire wood work of the sails. Examination showed that the shaft of the vane close up to the casting was a poor, cross grained piece of timber, and the only wonder was that it stood so long. Had the vane held its place the mill would have been safe against any blow that ordinary buildings withstand. One bad piece of material put in carelessly, occasioned the whole damage, which stopped "bee hives" for about four days and cost us over $50.00.

Moral. In buying or constructing a wind mill, insist on having the *vane*, most especially, strong and secure.

◆

In our own apiary we have lost 13 colonies out of 71. With the exception of perhaps two out of the thirteen, we have no difficulty in deciding where the trouble lay, and how the loss might have been avoided. Reports from all points seem to show that more bees were lost in the last part of February and March, than in the previous winter months, and in many cases after they had been enabled to fly out. We are anxious for all the facts we can get, but shall be obliged to drop the subject now until another winter approaches. Although some report decidedly in favor of out-door wintering, by far the greater part of the testimony would indicate *frost-proof repositories* the safest. Please give us your plans and opinions all; if we cannot publish them, 'twill aid us much in deciding what to advise in future.

THERE seems to be quite an error prevalent in regard to the "dollar" hive. It is the plan of making the *case to hold the frames*, only, wherein it differs from other hives, and the same idea will answer for a case to hold frames for American hive, Gallup hive, Quinby hive or any other hive so far as we know, and one story, or rather a case sufficient to hold the number of combs required for the brood and for wintering, can be made for $1.00; no matter what size or form of frame be used, and two of them will be needed for surplus. If frames be preferred spread out horizontally make hive of double width (see Jan. No., page 5.) and if the Quinby or Hazen form be desired use *two stories* of double width; these will cost three dollars instead of *two*, and can at any time be used for frames instead of boxes, and with 40 frames (common kind) at 2½ cents each, the total expense of a mammoth hive equal to the wants of any colony, under any circumstances, is only $4.00. Removing a part or all of the sides of a hive to get out the frames, or using close fitting frames of any description, would make it perfectly imposible for *us* to open and close hives with anything like the rapidity we do at present. We *do not* kill our bees in removing combs and seldom use smoke. The dollar hive is not *our* hive but can be made easily at the price, by any hive manufacturer.

◆

"OH, papa! Can't we make a grapevine grow up each post, and then meet the next one overhead, so we can walk under it?"

"Novice," with hammer in one hand and saw in the other, staring in open-mouthed astonishment first at his "precocious offspring," and then at the grapevine trellises, replies:

"Yes, my son, your idea is most excellent and opportune; for our three-foot trellises will prove rather small for a vigorous Concord without an amount of pinching back that would be irksome. A piece of hoop timber can easily be nailed against the first trellis, the other end extending up in the air and down again to the post of the next trellis, making an arch or bow of such heighth as to admit walking under it easily.

The effect of these 'arches of foliage,' and later, when they are covered with 'gracefully drooping pendants' of 'purple'———"

"Tie 'em up with blue ribbons," interrupts "P. G.," at which Novice breaks down.

P. S.—Novice, Jr., thinks if he is but ten years old, his plan should be patented, but his papa tells him he thinks patents—— "Supper is ready," announces Mrs. N., and Novice forgets both poetry and patents, at least for the present.

HEADS OF GRAIN FROM DIFFERENT FIELDS,

No. 55.—DEAR NOVICE:—Do you know why bees sometimes leave the hive during the winter, if there is a day warm enough for them to fly? During this last week the weather has been pretty warm and several stocks have left their hives and joined themselves to others. If they keep on at this rate I will only have one large stock next season. If the bees would only settle together, I could put them back, but they separate among the hives and force themselves in to them. I cannot understand why they do this, for all have plenty of honey; there is no sign of dysentery among them and they even leave brood in the combs.

CHAS. E. WIDENER, Cumberland.
MARCH 8th, 1873.

The above is some thing decidedly beyond our comprehension, and we would enquire if this happens with bees wintered on their summer stands, as a general thing. We have noticed solitary instances of the kind but never, we supposed, with strong, healthy colonies. Caging all the queens would be considerable trouble and would even then only prevent losing them, for they at such times do not hesitate to desert their queens, and a contracted entrance would be but little better. Give us all the facts we can have in the matter, and we will find a remedy we think. Mr. W. adds further:

1st. Do you allow your bees to swarm? 2d. How do you give meal to bees? I have tried everything but they will not have anything to do with it. 3d. Is maple sugar fit for bees to eat? 4th. Do you use the same quantity of sugar to a gallon of water, when making feed to stimulate the bees in spring? 5th. In an apiary of your kind, don't your young queens sometimes get "muddled?"

1st. Never if we can help it; though sometimes they swarm without being "allowed;" we think the proper use of the extractor will rarely fail to be a perfect preventive; we know of none other. 2d. We used to coax them near it with honey, but of late years they "go for it" very soon of their own accord. 3d. In the spring and perhaps if *very pure* for winter use also. 4th. For spring feeding we observe no rule and don't think it matters. If too thick they can fetch water, and if the reverse evaporate it. 5th. Never.

No. 56.—Where I live is rather a poor place to keep bees after the middle of July, and about thirty miles north-west from here it is first-rate after that date on the Monarda Punctata, which yields till frost plenty of honey, and the best kind, even better than basswood. There is nobody up there who has used a machine that I know of. Only box honey, of which I bought a box for a treat to my friends, although I had a half ton of white clover and basswood, and have got all yet, but two kegs of ten gallons each, which I sold for 15c. per pound to a store in Madison. I find that it will grow anywhere if cultivated, and in very poor sandy land without cultivation. I raised some of it in my garden last season, and I tell you it gave me a good deal of pleasure to see the bees work upon it. It is far ahead of catnip or anything else that I have seen; there are other flowers that they work on as well, but they don't get the honey so plenty. When you see them going quickly from one flower to another, just about long enough to smell them, there's not much honey there.

James McLay, Madison, Wis.

We hope our friend will send us some seed of the Monarda for our experimental honey garden. His remarks in regard to the hasty visits bees give some flowers we believe correct, for bees, like "we poor mortals," sometimes work industriously early and late and yet get but "little honey." We propose to test the honey qualities of all plants of which seeds are sent us (so far as we can on a small scale,) and will report at the proper season. Please give names and description as far as possible.

No. 57.—Novice:—Our bees are carrying in wheat flour at a fearful rate. Have had an unusually severe winter, but look for a glorious long season this year. Do keep us posted on the *honey market*. We are going for extracted honey entirely, and expect to have tons to sell. In haste,

S. W. Cole, Andrew Chapel, Tenn.
Feb. 6th, 1873.

Glad to hear it. No danger of too much.

No. 58.—I have for years made the simplified Langstroth Hive you recommend, and my honey extractor is all that could be desired, with a stationary can and galvanized screen inside, made by a neighbor mechanic.

S. Luethi, Gnadenhutten, O.

Thank you Mr. Luethi. We wish a few more would get neighbor mechanics to do the same. In our instructions for making an extractor in our Feb. No., we supposed we had given all the directions necessary, taking it for granted that all bee keepers knew that an extractor was simply a frame to hold the combs from breaking, while they were revolved inside of a can to catch the honey that flew out by centrifugal force; and we endeavored to give the simplest and cheapest way of making it, yet we are almost discouraged at the number of letters from all points, saying they can't make it out. Perhaps those that we have assisted most and *do* "make it out," don't write us because they have no occasion to. We will hope so any way. (Encouraging! Three just report having succeeded.)

No. 59.—E. M. Johnson, of Mentor, O., Jan. 1st, 1873, writes as follows:

I am trying the "vinegar bitters," as recommended by the anonymous writer in the *Journal*, and so far it is doing finely. The stocks fed with it are as small and lively as in summer. The size of the bees is meant and not the strength of the swarm, while those eating honey are already getting distended, and if they are confined long without getting out are going to suffer with dysentery; have only a couple, however, that show any signs of it; neither did I have more than two or three last year, until March, after which I lost about one hundred swarms.

E. M. Johnson,
Mentor, O.

No. 60.—

R. H. Dixon, Canandaigua, N. Y., asks: "How shall I make a feeder for encouraging brood for every day feeding? Can young fertilized queens be kept in cages in large hives, with laying queens at liberty, two or three weeks? How can I keep swarms from issuing, without cutting out queen cells or clipping queen? The best way of keeping empty comb through the summer, and comb with honey in?"

1st. Don't have a feeder; turn up one corner of the quilt and pour the feed on their backs.

2d. Generally, but expect exceptions when they are not gathering honey.

3d. Take all their honey away with extractor.

4th. Put 'em in a dollar hive and "pile 'em up."

No. 61.—"How am I to manage to overhaul hives in the cold, bleak weather of April, to cut out moldy combs, clean out dead bees, contract space, feed to get bees to breed, etc? When the weather is chilly and damp the bees fly out on account of the disturbance, get chilled and never return.......Is it not about time for me to stop fooling away money and time on bees? on the ground that the section is unfavorable or I am unqualified for the business of bee culture. Think of it—I have been trying to get a start for the past three years—have paid out for bees alone not less than sixty dollars, for lumber, hives and fixings, enough to bring it up to a hundred—my wife says more than time enough to make as much more—two hundred dollars is a large sum for a poor man with a large family. Last fall I had managed at a cash cost of all they were worth, and trouble and worry enough to pretty nearly add as much more, to get four hives. But what I consider to have been the strongest one, is dead; one of them is rather weak; two have no brood, yet they have queens and eggs. The one that is dead had nothing but honey; the weakest living one had nearly all sugar syrup....... If the bee fever continues to rage, what section had I better emigrate to?

Very Respectfully, Yours,
An Unsuccessful Novice.

Never cut out moldy comb, however bad, until you have found by putting one comb at a time in the middle of a strong colony in May or June, that they won't make it good and use it at once. We have never failed in getting our *worst* combs made good if given a colony of Italians or Hybrids. When absolutely necessary take your bees to a warm room to overhaul, but otherwise never disturb them in weather that will prevent their returning to the hive, for we can't afford to lose bees in the spring "no how." Follow instructions given in "Starting an Apiary" and you can't well go wrong. Haven't you wasted some of the $200 for patents? Either you have the value of the money in materials, etc., or it has not been judiciously expended. As we have said before, we insist again, that the greatest difference is in the bee keeper, and not seasons or localities. Experience will show you where you have failed, and if good results have been made with bees in your vicinity, they probably can be again. Don't emigrate, but see if you can't give us a better report ere long.

No. 62.—I don't know but that our bee doctors will make "confusion worse confounded" by their teachings, (compare together the last two numbers of the *American Bee Journal*, at Washington, for instance), but we learners still "want to know." You may perhaps remember that Gallup and I had a short passage at arms some time ago about wire gauze. Nothwithstanding, I still use the gauze and think it a very convenient thing to keep the bees from gnawing through the quilt or sticking it fast to the frames with propolis. And then it is so nice in the spring to turn back your quilt and sprinkle stimulating food through the gauze on the cluster of bees beneath; and no danger of even cross hybrids standing on their heads, getting in a passion, or going for you like a shower of shot.—[Dec. 21st.,'72.]

WELL "Novice," I don't know but that I too will have to swing "my old hat." Bees so nice, bright and active. No robbing this spring; no use to try, too many wideawake guards to face. Bees carrying in flour, pollen, and water, and drones on the wing to-day. Guess they don't know what an arctic winter has lately visited these parts, and consigned most of their summer-stand sisters to the shades. Perhaps they don't look with an artistic eye on the bright and symmetrical appearance of "our city," caused by an application of white paint, combined with a "honey-comb" arrangement of the apiary. "*a la*" "Novice," though they fill the air with their music.

D. P. LANE.

KOSHKONONG, Rock Co., Wis., Apr. 19, '73.

We don't know how the *doctors* get along wintering, but do know we succeed with very little trouble. Thanks for the idea of stimulative feeding.

No. 63.—And now, if you judge the length of a man's face by the number of bees lost (as friend Lucas does), just put me down as the longest-faced bee man in Summit county. I suppose you can judge somewhat how a poor fellow feels under such circumstances. Not much discouraged, but a little tired. I am almost ashamed to own it, but truth must out. I have lost 35 swarms last winter and this spring, the greatest loss I have ever sustained, and I am not alone in our town, for from one-half to two-thirds of all the bees are dead. Old fogies have fared the best this winter, and they have nothing to brag of. I had a great many die out, leaving plenty of honey in their combs. I have a nice lot of combs in frames for over 50 single hives. My intention is now to build up swarms this summer and not make honey only in a few hives scattered abroad amongst my neighbors. I was to blame in my great loss; it being late when I returned from Nebraska (I not having reduced my two story hives before going West) and the weather being so unfavorable I neglected to do any thing with them at the time, hoping the weather would change for the better; a delusive hope. This being the second time in 15 years that I have left my bees out of the house, with about the same result; a too dear experience, I hope, for me to try again.

THOMAS PIERSON, Ghent, O.

SOME KERNELS FOR "GLEANINGS."

To those who are anxiously and patiently working for simplicity and ease in handling hives and bees, I would ask a question and offer a suggestion for their digestion, if you please. I use no gloves, and seldom a veil, and when I get stung I squeeze the poison and sting out of the skin with my thumb nail against the fore finger. Keep the thumb nail long.

I would like to hear of an extractor at a reasonable price. From $10 to $18 and express charges is simply prohibition to the great majority of bee-keepers. The inside, or running parts, might be made portable, packed in small bulk and sent at less expense, with instructions for putting together and use. The can, or outside part, could be made by any tinsmith, or a half barrel might be used in an emergency. There might be a patent here for some of our landsharks.

Those that are troubled with their bees "laying out" can cure that by a wire cloth bottom board. An opening at least 1 foot square, covered with wire cloth 8x8 strands to the inch, and a slide to close tight, stopping all draft when necessary, I consider indispensable, in very hot weather, even when they have plenty of room inside.

WM. H. KIRK, Chesire, Conn.

We can furnish the inside work for an extractor for $2.00; gearing included, $3.50. This includes everything except the barrel or can; two size castings are made, viz: to fit 17 and 20 inch cans.

With movable bottom board we should think an opening covered with wire cloth unnecessary.

PROBLEMS.

NO. 10. How can we hinge a cover to a dollar hive in such a way that it will open and shut nicely and still be capable of being removed instantly without a screwdriver or other tools, and also be attached with equal facility to any other hive? Such a hinge could be made but is there not something in the market already at a low price by the quantity? We think we should abandon the idea of having a handle in the center of the cover, for a quilt is all the cover needed in wintering or in carrying frames about in the apiary and is much lighter. By having places cut in the sides of the hive for the fingers, near the top and not quite through the board, they can be raised up and carried very conveniently, for the hive, quilt and frames, as we make them. only weigh about 10 lbs.; and the weight of the bees, hive, stores and all, ready to go into winter quarters should not exceed 40 lbs. Any man, aye, or *woman* either if need be, should be able to place the whole apiary in winter quarters in a couple of hours, and feel all the better for the exercise. (Mrs. Novice and "P. G." protest so much against this latter, that we shall have to add that we meant when they enjoyed *the* health and strength that God intended for them, which "open air exercise" would very materially aid in giving them.)

No. 11. Suppose we sell the queen from ten hives in May or June and put the combs, brood and bees all in one mammoth hive of 100 frames: what would they do as honey gatherers? and would one queen prevent queen cells being built? Who has tried the experiment or a similar one? With the extractor we have no fears of being unable to prevent swarming.

◆

HONEY COLUMN.

AS no one now offers any honey, we must conclude that all have sold out, *even* "*Gallup.*" If the whole of last year's crop is already exhausted, we must conclude that Extracted Honey is not "so much of a drug" after all, for it's certainly good the year round.

E. M. Hatch, Evanston, Ill., writes: "I am desirous to raise box honey, but the shameful imitations of "pure extracted" will, I think, destroy the sale of the other. Give us all the help you can."

If every one of our readers will send us names and address of all persons dealing in spurious honey, we will give them an airing or our name ain't "Gleanings." The *American Grocer*, published weekly in N. Y., has promised to aid us in the sale of pure honey, and as they have a "swindle" department, too, if we can't handle the matter we will procure their assistance.

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advance: and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

WANTED.—300 hives of bees to be used as nurses in rearing Italian Queens.
Address, R. WILKIN,
Cadiz, Harrison county, Ohio.

ALSIKE CLOVER SEED.—A nice article: 50 cents per pound by mail or 35 cents by express. A. I. ROOT & CO., Medina, Ohio.

ITALIAN BEES.—We offer for sale about 200 colonies of Italian Bees in the American Movable-Comb Hive. Also Queens throughout the season. Purity and safe arrival guaranteed. For further particulars, prices, &c., send for circular.
BALDWIN BROS.,
2-9 Sandusky, N. Y.

BEE BOOKS.

ADAIR'S Progressive Bee Culture, price 25 cents. Adair's Annals of Bee Culture. The third volume just out. The first volume is exhausted; the other two will be sent by mail at 50 cts. each, or the three bound together in cloth for $1.75, or either in cloth for 75 cts. Any of the standard Bee Books or Journals can be furnished at publisher's prices. D. L. ADAIR, Hawesville, Ky.

PRICE LIST OF PURE ITALIAN Queens and Bees from Shaw & Daniel's Apiaries, for 1873:

For last year's Queens, sent as early as the weather is suitable, $5 each.

Tested Queens, during the season, $4 each.

Untested Queens in June and July, $3 each. After the 1st of August, $2.50. All Queens sent by mail warranted pure and fertile. Safe arrival guaranteed.

Nucleus' Hives containing pure Queen, with 6 frames each, 8½ by 9½, $8 each. Can be built up into strong swarms or used for wintering surplus Queens.

Full colonies in one story Langstroth Hives, ten frames each, $13. Wide hives with movable partition board from 14 to 17 frames each, $15. Two story hives containing 21 frames, $15 each.

American Hives, containing 9 frames with space between top bars, $15 each.

Each colony will contain a young Queen and 9 frames of comb, with extra frames. Sent by express and safe arrival guaranteed.
Address 1tf
J. SHAW & SON, Chatham Center,
or I. E. DANIELS, Lodi, Medina, Co., O.

WE CAN FURNISH HIVES ARRANGED
For the Quinby Frame,
For the Gallup Frame,
For the American Frame, or
For the Langstroth Frame,
At the uniform price of $1.00 each or 90 cts. ready to nail. These will hold such frames as are commonly used, or we can furnish frames with metal corners for 6c. each, or both kinds of frames can be used in the same hive. We can also furnish an extractor made especially for either of the above. Cheap style, $6; best, $11, ready to ship by freight or express. We offer the above principally as samples, and repeat our former statements that some one should furnish such articles in every neighborhood, and thus save transportation expenses. The above hives are one-story, and it takes two of them for a two-story hive. As bottom board and covers are just alike, only one is furnished with each story. About 150 metal corner frames complete, can be packed in a single story. A. I. ROOT & CO.,
Medina, O.

"NOVICE'S" Gleanings in Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., JUNE 1, 1873. No. 6.

STARTING AN APIARY.

No. 6.

BY June 1st, all Colonies should be strong and ready for gathering, and the skillful Bee Keeper should be able by diligence and care, to make them so; independent in a measure, of unfavorable weather. That is, if we *are* unable to make up for bad weather during the yield of honey, we should be at least able to get our stocks all in condition for honey gathering before the honey season *does* open. To do this, brood rearing must be kept up during March, April and May, and this must be done, even should a season occur colder and more backward than was ever known by the "oldest inhabitant," etc., and in short, we shall tell you that if you don't get honey, the fault is in the Apiarist and not the season. If colonies get weak as they will sometimes, it may be necessary to take them to a warm room, and to avoid the inconvenience of invading our dwellings, we will have a stove in the bee house temporarily, in the spring if needed. If the upper ventilator be made of galvanized iron it will answer equally well for a chimney, and a stove can be set up with little trouble. Warmth and food will always induce the queens to lay, but it is another thing to get the eggs hatched into larvae, (see Problems.)

Losses in the spring months must be avoided, and after one or two lessons of experience, we shall expect you to keep good all stocks having a laying queen after they are on their summer stands. Let every reverse only make you all the more determined to do better in future, and keep at this time of the year a constant watch over each individual colony, for you may set it down that those colonies that are petted, opened and handled most, will always be the best; be gentle and careful and don't stand before their door-way, nor annoy or hurt them in any way, for they very soon learn to distinguish your attentions from the rude bumps and jars that too often fall to the lot of bees belonging to those who seem to think them sworn enemies to mankind.

We are often told to provide hives, etc. for new swarms, but we say provide barrels for your honey, and we should say at least one for every five colonies, for you may have a flood of honey without notice or warning, that must be taken care of as fast as it comes, or it is lost irretrievably. Get good, sound, new oak barrels; strong and tight, and to be *sure* they won't leak, treat them as follows: Get bungs nicely fitted and everything handy and then pour into the bung-hole, through a tunnel with an opening as large as will go into the bung-hole, not less than ten lbs melted bees-wax made quite hot; drive in the bung, twirl it quickly on one end then the other, then roll it once over and back to the point of starting; knock out the bung, which should come out with a "pop," (remember not to hold your head over it,) with the help of an assistant pour out the wax, and if you have done all "quicker than blazes," you will find your barrel nicely coated, every crack and cranny filled and not more than ½ lb. of wax used. The hot wax heats and expands the air inside forcing the wax into the pores of the wood and coating the whole as if it were varnished; with a small mirror you can reflect the sun on the interior so as to examine the quality of the work.

Place your Extractor on a bench or shelf placed at the center of the south side of your bee house, and of such a height as to allow of rolling a barrel so that the bung-hole just comes under the molasses gate. Screw the Extractor down firmly and make some little bags of cheese cloth for strainers, these are to be hung in the bung of the barrel with a wire ring a little larger than the hole, sewed in the top to support it. All the arrangements should be used and taken care of by some one of the "neater" sex, for if their strength is not as great, they more than over-balance this by their dexterity and cleanliness in the use of such implements. A couple of barrels make all the stands or tables needed. (They should be well painted after being waxed and the hoops driven tight.)

A wire strainer will be needed to set in the top of a deep jar to place the cappings after each day's work; don't put them in the top of the hives nor attempt to save any honey of any kind by giving it to the bees during the working season, for it will prevent their gathering honey to an am't greater than such odds and ends are worth. After the caps have drained several days, separate the wax and honey with the wax extractor. Our wax extractor cost us about $8.00, but something to answer the same purpose could be made by almost any tin-smith for not more than half as much.

With the given arrangement of the apiary, the labor is not great, if each comb be carried in and extracted as fast as the bees are brushed off; but if preferred a light frame can be used holding from five to ten combs. With proper care in avoiding any exposure of honey that may incite robbing in the forepart of the season, that disagreeable feature in operating, may be almost unknown.

When you have some honey barreled ready for sale write us how much you want for it and we will open our honey column again, and we hope to make it a long list too.

P. S.—"P. G." says, "tell 'em" before waxing the barrels, to stand them in the sun until they are hot and dry, drive down the hoops and proceed. If the barrels are cool or cold more wax will adhere than is necessary or profitable.

QUEENS.

PROLIFIC queens are an absolute necessity for strong colonies, and strong colonies are the only ones that give us profit. We have, for many years, built up weak colonies in the spring at the expense of combs of brood from the strong ones, but we have of late come to the conclusion that we damaged our best ones by so doing more than poor ones were worth; yet it must be borne in mind that this applies only to such as are weak, because the queens are *not prolific*; occasionally the bees get thinned down in spring by dysentery or gradually from freezing in small clusters away from the main body until they cannot take care of the eggs even, of our best queens, and such stocks it will unquestionably pay to help. We have this season several colonies that had dwindled down to almost nothing, and to save queens that we supposed valuable, after futile efforts to strengthen them up with hatching brood, we caged their queens and exchanged places with strong colonies while flying briskly. Two of these were killed when released, although they had been caged four days; one don't lay eggs at all now, and two have been replaced and queen cells started from *their* brood, a state of affairs that don't please us we assure you. It is sometimes difficult to decide whether the fault is with the queen or elsewhere, but we should advise replacing all queens not up to the standard, as soon as we can get a better one. We can usually judge of the queen's prolificness by her manner of depositing the eggs. If we find eggs and larvae of different ages mixed up with sealed brood, we should pronounce the queen a "slow coach" and deficient in system and judgment at any rate, and after submitting her to the following test we can be pretty sure of getting a correct measure of her worth, viz: as soon as the colony will bear it without injury, place a nice, clean, empty worker comb in the center of the cluster, and in 24 hours count the eggs, and see if they are in a compact cluster. If at the first experiment the comb should be filled with honey and pollen, try it again. In good weathes not less than 1000 eggs should be deposited in that time; but much depends on the strength of the colony.

Who can report the largest number of eggs in a comb in 24 hours?

If so many queens are poor, the question may be asked, how are we to be sure of rearing good ones? That's the question, and to be frank, we really don't know. We *do* know that we have reared long-lived, prolific queens many times under what would be called quite unfavorable conditions, and others reared under conditions that seemed all we could desire have failed in from three months all the way up to three years. Although we have used queen cells constructed when a queen was to be replaced, and also at the time of natural swarming, we find them on an average no better.

Suitable weather and *enough* bees (more than a fair working colony is useless) seem almost a necessity, but even then but few extra prolific queens are reared.

"Novice" insists that "lots of pollen" is the key to invariable success, but we can hardly expect anything practical from him until he gets somewhat over his "pollen mania." If each one of our large family of *novices* will send in their experience and opinions on the subject, we may be able to *glean* from them something valuable. Are queens reared late in the fall or early in the spring usually as prolific? "P. G." thinks a lot of queens equally as good as a dozen of our best, would be worth $25 apiece to us now, but that a dozen like our poorest would be dear at about *four cents* apiece.

WE will, for the benefit of Apiarian Science, advertise gratuitously anything we deem of universal value to bee keepers, offered at *low rates*. At present this department only includes honey and eggs from Imported Queens. We hope to add artificial comb foundations, when some can be furnished that fully answer the purpose.

AGASSIZ'S "LIFE IN THE BEE HIVE."

IT would seem that, in this age of bee journals and in consideration of the fact that under the present system of managing bees whereby the bee-keeper becomes as familiar with all operations of the interior of the hive, almost, as of the transactions of his own domicile; our people's teachers might at least keep pace with our late discoveries, and drop errors of the past, since even "Novices" now recognize them as such.

The lecture of Prof. Agassiz, as we have it in the *Tribune* of May 10th, given at Cambridge, Mass., must have been the work of some one not conversant, personally, with bees, and not familiar with modern bee-keeping.

Passing over the remarks in regard to swarming, for the error in regard to the *cause* of swarming may have been only the effect of so brief a notice, we read:

"The swarm having alighted near a favorable spot, a single working bee—one out of twenty thousand, perhaps—starts from the crowd and lays, not the first stone, but the first piece of wax which is to be the foundation of a new comb."

And again:

"The first bee having made the first cell, a second bee comes and stands opposite her, head to head; then another at her side, so that the two stand side by side, and the rest follow in definite position, each building a cell around itself, until gradually a good-sized comb is built."

Now *actual observation* shows (and the matter can be tested in a few minutes in hundreds of apiaries where the bees are accustomed to being handled) that a "single bee" never makes a cell at all, and bees *never, under any circumstances*, "build the cells around themselves," but that in comb building the bees all change about so rapidly that it is seldom that any bee builds comb more than *five minutes at a time*, and even then the work is a series of skippings about from one place to another, always standing on the *outside* of the cells; and the surprising part is that the work of each one so nicely agrees with that of the rest, as if each one was only a part of the same insect or organization, for whether they build worker, drone or queen cells, they agree in working toward one common end.

The cells are seldom or never built full length at once, but are sometimes used by the queen when scarcely more than the foundations are completed, and are also used for honey and pollen when built half length or less, and are afterward lengthened out as needed. Finished comb is also "cut down" and "lengthened out" as circumstances may require for brood-rearing or honey-storing, as the case may be, so frequently that our combs are constantly undergoing change; and all this work is done by no single bee, but by the community, seemingly guided by one intelligence.

Although considerable variation can be seen in some combs, many of them, when conditions are favorable, are more uniform and correct than most works of art, or nature, either, and we believe we are justified in saying that irregular comb is the fault of external conditions, temperature, ventilation, etc., and *not* the fault of the bees.

Again we read:

"Two or three such cells will usually be formed in one comb. In old colonies it often happens that no provision is made for the advent of a new queen, and in that case no royal cells are built; but in a new community several such cells may be seen upon one comb."

The above leaves the impression that queen cells, as well as drone cells, are an original and permanent part of the comb, which is by no means the case, for they are constructed only temporarily and over any cell upon any part of the comb; are removed immediately as soon as they have been either used or abandoned, and are never seen upon the comb only at such seasons of the year as they may have occasion to rear queens, unless it be an exceptional instance, where a comb has by some means got outside of the cluster before the cell was removed, and then we have only the rudiments of what may have been or was intended for a queen cell. Queen cells are rarely, if ever, used twice for the same purpose, and we should at once consider that something was wrong with the queen of a "new community" should they construct queen cells on their combs.

Since queen-rearing has become an important industry, points that were but little understood a few years ago are now quite familiar matters, and our queen-rearers have, with much care and skill, carefully noted all the requisite conditions for rearing perfect queens, and, what is still more commendable, have compared notes through the medium of our bee journals, each one giving generously the full result of his or her investigations, and, as a consequence, error has given way and much truth has been brought to light. When scientists can be brought to work side by side with our *practical* workers, we may hope for better things; and the fact that the latter class are mainly actuated by dollars and cents will not, we hope, be found to make their deductions any the less valuable.

◆

OUR apiary now numbers only fifty seven hives that have bees in, and of this number ten are queenless, besides a dozen more that contain queens of the "four cent" valuation; for they scarcely excel "Old Grimes' hen," that

"Laid two eggs on every day
And Sunday she laid three."

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, June 1, 1873.

IN our January number we gave the credit of the "Railroad idea" to Mr. E. B. Blakeslee; it should have been E. C. Blakeslee, Medina, Ohio.

◆

AT present, May 22d, both the bees and "Novice" are rejoicing over a yield of honey from apple blossoms that we have never before seen excelled. Some colonies have filled one story so full that we have given them a second one, and at this rate extracting will have to be the order in less than three days; yet not more than a week ago we were feeding to prevent starvation. "Such is (not life, but) bee keeping.

◆

WE are really fearful at the present date, May 28th, that "eggs for hatching" will only answer when mailed short distances; for our third piece of comb from Mr. McGaw has also failed to produce any brood although the weather was quite favorable during transit. As an experiment we have to-day placed a piece of comb with eggs in our bee house and will report just before going to press whether it retains vitality three days. As we can get no imported queens until Dadants first importations, we are obliged to send such eggs as we have, or forward the orders to Mr. McGaw. We consider a queen received last fall from R. M. Argo, Lowell, Kentucky, our best for disposition, and abundant egg laying, and shall send comb and eggs from her. Of three queens received from Mr. Cary, of Colerain, Mass., we succeeded in bungling them *all* out of existence finally, and Novice sorrowfully remarks that he fears he shall be a "Novice" always.

LATEST:—Eggs out of hive three days, *all right*. Temperature 50 to 80°.

GOD helps those who help themselves, is an adage quite true in bee-keeping. In the spring of 1869 we lost all of our forty colonies by dysentery except eleven. These eleven were increased to *forty-seven* colonies that season, for our losses only strengthened a "dogged" determination that we *would conquer*, and with the aid of our bee house we wintered every one of the forty-seven, and secured 6162 lbs. of honey from them in 1870, which was sold mostly for 25c. per lb. *We worked* for this result, for the sting of loss in wintering was not lessened by the prophesies of "wise heads" that such enormous increase could not be healthy and and natural; but the *three tons* of honey was *both* "healthy and natural," and we laughed in turn at those who had talked "nature" versus artificial swarming.

◆

ROBBING.

MANY complaints have been made this spring about robbing and that even Italians not only failed to defend themselves at times, but allowed the invaders to carry off their honey with perfect unconcern and good nature. Now we have prided ourselves on having hept *our* bees all honest this spring, and have told our friends that the fault must have been their own carelessness, etc. But just as fruit blossoms were yielding their best, it occurred to us that our Quinby hive should be brushed out and got ready for a new stock of bees. The hive contained perhaps twenty or thirty pounds of sealed honey, natural stores which remained after a strong colony had died of dysentery in it in March; (exclusive natural stores as a last experiment); well after all our care and experience we forgot and left *the entrance open*, and of course *we* had robbing too. The mischief was stopped as soon as discovered (only a few hours) but not before three colonies were in turn attacked and demoralized before we could get them sufficiently over their astonishment to defend themselves from the ruin that they, for a wonder, seemed to be entirely unaware was threatening them; two of the queens were found, but died afterward. They were caged and their hives "swapped" for those of the robbers; this gave plenty of bees and stores, but we now have queen cells instead of queens, which we think a bad "swap" for the first of June. Novice really begins to think that if things continue thus he will have to turn back and learn over again. MORAL.—Be very careful how you leave combs of honey at *any season* where bees may get at them and thus acquire bad habits.

HEADS OF GRAIN FROM DIFFERENT FIELDS.

NO. 64.—Is dissolved sugar as good for raising young bees as honey? You appear to "go strong" on wintering bees on sugar. In this country, where honey is high, I would like to put as much on sugar as I can. DANIEL FORD, Floral, Kansas.

We think it certainly as good and without question, cheaper. Reports from many sources justify us in saying that the addition of cream of Tartar, vinegar, glycerine, &c., are entirely useless. Mr. Johnson informs us (see Heads No. 59) that his bees did not winter well after brood-rearing in February and March, and that he considers the vinegar injurious although his great loss was occasioned mainly from large amounts of honey dew gathered last fall. A single comb of such honey, heavy and *completely sealed* would kill a strong colony *in a week* that that had been heretofore healthy; and, strange to say, the bees seemed to winter on it well enough until they commenced brood-rearing. Is there not a connecting link between this fact and the idea in Problems of this No.? To go back; for spring feeding use sugar and water in whatever form is most convenient, so that bees will take it without waste, and it may be dissolved in hot or cold water, as is convenient; and the same can be said of feeding to prepare colonies for winter, only it *must be sealed up before cold weather*.

65.—I put 10 stocks of bees into a clump made by piling the hives in a pyramid, covering with straw, then earth, with no ventilation. One died from lack of stores and one from having nothing but candied honey. The rest came out in splendid condition, with the exception of a few mouldy combs. Most of the stocks were weak when put in and had very little honey. I think the clamp is a good way to winter weak stocks. I put them in Nov. 12 and took them out March 25th. APIS.

Will Apis tell us if the candied honey was sealed over? It is our impression that neither honey nor sugar syrup is injured by being candied if sealed over. The objections to clamps are the necessary litter and untidiness generally, besides inconvenience of access.

66.—It has been a principle with me for several years in market gardening to raise the largest possible amount from the smallest amount of land, and to sell so cheaply that those who had heretofore bought articles at high prices as luxuries could now buy so low that in time they would consider them as a necessity, and by this means create a permanent market. I think that to be the drift of "Gleanings," and if so I'm with you. You claim to be a Novice, but I am a "novice-er" fellow than you, and when I read the article, "Italian Queens for Twenty-five Cents," the idea occurred to me that pure bred drones could be shipped cheaper than either queens or eggs. What think you of the idea? Would it not revolutionize things somewhat! Stock breeders tell us that by using the rough bred males always we can soon obtain all the desirable points we wish. Following out the idea, I do not see why pure drones, of which there are always plenty, could not be used to fertilize our black queens by Mrs. Tupper's method, and in a short time our colonies could become Italianized. I do not know why a lot of drones cannot be kept by themselves on hand for use whenever wanted through the season. J. M. HILL, Greenville, Ill.

In our locality black drones outnumber Italians so greatly that we fear the use of drone eggs will be of little use. So *very few* have succeeded with Mrs. Tupper's method that we fear it will have to be abandoned, and can't help thinking that there might have been some mistake in the original experiments. Until we can have some process by which others can succeed at least occasionally, we should advise not spending more time or money on the subject.

67.—How would it do to paralyze bees with puff-ball and commence transferring immediately in a warm room? I think I will try it. N. E. PRENTICE, Castalia, O.

We would much rather have live bees to deal with than paralyzed ones, for they would then get out of the way and cluster around their brood. Turn over any box hive and give them a little smoke, and they are almost as harmless as flies. During the bloom of the apple trees we should even omit the smoke.

68.—For the past two winters I have left my strongest stocks on their summer stands protected from the north wind, and they have died. While I have saved most of those put in the cellar and some of them are very light. M. G. PALMER, Portland, Maine.

Such seems to be the general report, although a few report directly to the contrary.

69.—1st. How can you raise bees and grapes together? Our Congressman, Hon. R. T. W. Duke, refused to receive as a gift one of your papers, saying he intended to destroy his bees because they destroyed his grapes. Send the *Journal* to him at Charlottesville containing your answer.

2d Is the wintering house for bees advisable in middle Virginia? Not a month passes but the bees can fly out, no disease, no loss except from starvation or loss of queen, late swarms useless, and no pasturage after the 15th of July.

3d. How can I remedy the defect? want of late pasturage.

4th. I want to make five Italian swarms out of the 25cts. of comb. How am I to do it? I have a lot of comb on hand in Langstroth frames and some 20 stands of bees mostly in Langstroth's hives. Season bad for 12 or 15 days past—cold and wet. Apple tree blossoms lost. I once wintered a late swarm in a dampish cellar on 5 lbs. of honey; combs very moldy, no upward ventilation, little loss in bees. 15th Nov. to 1st March. JOHN B. TOWNLEY, Red Hill Depot, Va.

1st. After giving the matter considerable attention at different times we fail to discover that bees ever notice grapes of any kind unless they are broken open by birds, fowls or insects, they then gather the juice as they do from sweet apples, etc. We have always raised a fine crop of Concord's and some Iona's, Catawbas, Isabellas, etc., but never had them injured in the least by the bees, although our hives have clusters of grapes all about them. When common fowls had access to our apiary the bees seemed quite active on the clusters they had broken and destroyed; but when they were fenced out, the bees ceased to notice the grapes although many of them hung on the vines until after frost.

2d. Having had no opportunity to test

the matter would suggest that bees be housed in a location where a zero temperature is known in winter. We think a saving of stores might be effected even in warmer climates, but perhaps it might be necessary to use a cellar or one made purposely, to keep them cool during warm spells.

3d. We think it will be found that as more bees are kept, pasturage will gradually improve, for those plants that are visited most by bees produce more perfect seeds, and thus the bees themselves ultimately aid in producing fall pasturage by their agency in fertilizing the blossoms. When you (and bee keepers generally, of course), have kept 40 or 50 colonies in one locality for a half-dozen years, we think you *too* will find that you have fall pasturage.

4th. When you have the eggs hatched in your pieces of comb (see directions in May No.) make five nuclei and compel them to raise queen cells from the larvae in question. When the queens are hatched build them up by combs of brood from other colonies; your empty combs will assist very materially. *We* have also known a colony wintered on a little over one pound of food per month, and have faith that it *can be done* every time; but we have as yet been unable to arrive at such a result uniformly.

70.—Four years ago last fall, two of my brothers, who were partners living near Covington, had 38 colonies of bees and it so happened that one of our merchants had a lot of good coffee sugar which somehow had got scented with coal oil, so he offered it at half price. My brothers concluded to try some of it for their bees, so they took all the honey away from one stock and fed them enough of this scented sugar to do them over winter, they took it as though there was nothing in it and sealed the most of it over nicely; during the winter and spring they lost all their bees by dysentery except four, and the one that had the sugar was the only one that was not diseased.
JACOB M. MOHLER, Covington, Ohio.

We give the above as a sample of many of the reports in the same direction. Next fall we will try and give plain and and simple directions for preparing bees for winter.

71.—My experience in losing swarms by the swarming out process is as follows: I have never known a swarm in good condition with plenty of bees to leave the hive, whether wintered in a repository or on their summer stands. I have frequently lost, and have lost this spring, several weak swarms. Is it possible that a few robbers get in and demoralize the swarms causing them to fly out leaving honey, brood and even the queen? I leave the question for others to solve.
SCIENTIFIC.

Reports seem to indicate that it is weak colonies generally, but sometimes, we are sorry to add, good, strong ones; and we feel "cross" now to think of the recent loss of a favorite queen, bees and all by this cause, leaving much unsealed brood in all stages.

72.—I like your hive except the entrance, which looks like a poor thing. Perhaps your door-step when attached, makes it all right. Can you regulate the entrance in hot and cold weather in a satisfactory manner.
JOHN ASHLEY, Bloomington, Ill.

With the door step, (which should have two strips nailed across like a letter V inverted, to prevent warping, and to guide the bees to the entrance when made small in the spring,) we have no trouble. Those who prefer, can bore an auger-hole in the front end, and Mr. Quinby, we believe, thinks such an entrance an advantage, because the bees show a preference for it; we, however, can discover no positive advantage and dislike the holes when any one of them happen to be used for an upper story. Our aim has been to have any piece answer equally well anywhere, and to have those pieces as few and as plain and simple as is possibly consistent, with convenience and rapidity in handling.

73.—Notwithstanding my loss, the evidence I see in favor of Sugar Syrup is so favorable that I would without doubt feed it on a large scale in preference to their native stores. It does look to me as if the idea would be one of vast service to us notwithstanding I have been slow to conclude that any food was as natural for them as their own stores.
R. WILKINS, Cadiz, O.

74.—However objectionable tight top bars may be, I must think that it would be an advantage to have the frames secured in their places at the top at least. I expect my ideas will be much modified by experience, but I find it very much like learning to swim; you have got to go in on your own judgment before you know how, but had better keep in *shallow water* until you know what you are about. I want all the advice from the experienced that I can get, but as much of it is so conflicting, shall have to decide for myself after all.
G. LEE PORTER,
Cedar Mountain, N. C.

Mr. P. utters some rare good sense in his last remarks, and we do hope he will *try* closed top frames in "shallow water" before "going in deep;" as our experience may have some weight, we will give it freely. After an experience of five years with about 30 hives with closed top frames and as many more open top, we were forced to conclude the closed top out of the question, where bees are to be handled, as it seems to us they must be for box or extracted honey either. Wherever bees find two pieces of wood close or near each other in the hive, they glue them fast with propolis; also every crack and crevice and even the entrance blocks are "gummed" in place so that unless they are frequently "scraped off" they cannot be kept up in place. Again, combs all alike in thickness and curvature, for they will curve, are not to be had, and the consequence is they must be always replaced in the same order or brood is killed and bees and combs are crushed. If we attempt to number the combs and always keep them in the same place and in the same hive, how are we to make artificial swarms and equalize brood and stores. Whenever an opening is made into a hive large enough for a bee, those inside especially young bees, begin to crawl out and those outside to crawl in, and when we are closing the tops of the frames together the same thing happens; it is true by bringing the sharp edge of the frame up gradually they can be made to crawl in or out, but can we afford to waste so much time, for in extracting 50 two-story hives we should be obliged to do this 1000 times. With frames made of $\frac{7}{8}$ width top bars we can give each comb wherever it may come, all the room needed, and the average thickness of the ten combs being such that we never find any trouble in giving each one the proper amount of room, or in removing any one we wish "in a twinkling," even without stopping operations in comb building, brood rearing or ovipositing. The same remarks will apply equally to closed end frames, yet almost every beginner in apiculture "goes strong" on the idea that frames should be kept at fixed and equal distances; a very nice theory, like many other things, but we believe generally quite inconvenient when put in practice.

75.—Do you leave all the frames except the one in which you put the piece of comb, empty, or is it better to put in with it, other frames containing brood, &c., from the old hive? Please answer if not too much trouble, for I am a beginner.
JAMES W. SEWALL, Old Town, Maine.

A frame of sealed brood just next the comb containing the eggs from the imported or choice queen, would be an excellent idea if one could be found in the old hive *positively* without eggs or larvae, or any brood comb might be put in *after queen cells were sealed* from the choice eggs. But be sure you make no mistake or you might blame the sender of the eggs when he was not in fault.

76.—Tell the boys and girls to carry two or three *pine burrs* to throw at flying swarms, it will bring them every time, for pine burrs look like a bunch of bees.
W. STUART, Natchez, Miss.

AN ITEM.

IF a swarm of bees is hived in a "simplicilty" or other movable comb hive, will they be as likely to build combs across the frames as parallel to and in them? What plan do you adopt to make them work by the "square rule?" We need more light on the question, "How shall we get the bees to build straight combs in frames?" Light *your* candle, friend Novice, and place it on a "simplicity" hive. JOS. SINTON, Ithaca, N. Y.

A pious old deacon who was fond of fish once told his boys "never, under any circumstances, to go fishing on the Sabbath; but if they did to *always bring home the fish.*"

Now we say don't have natural swarms, but if you do, always give them some comb for a pattern, and insist on having each comb built between two good ones, or one and the side of the hive. This is no more trouble than to feed your pony daily, yet you never omit *that*. We know of no nicer fun than to watch and direct the growth of new combs. Again, never put a new swarm into an empty "simplicity" hive, but if *you do*, fix the quilt closely over the top of the frames and raise the back end a little; we believe the bees seldom fail under such conditions to build their combs along the thin comb guide.

WE clip the following from the *Rural New Yorker*:

BEES BY MAIL.—The shippers of bees by mail are complaining because some of them pay only paper postage on their shipments while others are compelled by post-masters to pay letter postage. They demand an uniform interpretation of the law. Then the post-masters are complaining because bees are shipped by mail, and evidently think they should be excluded. They are shipped in this wise: The cage is a block of wood, in which are three large holes, covered with a fine wire netting. Seven bees, including a queen bee, are placed in each compartment, and are introduced through a hole in the side of the block, which is plugged up by a piece of sponge soaked in honey. The post-masters and clerks allege that the honey soaks through the paper placed over the holes and daubs other mail matter, and besides, as one post-master complained, the clerks in his office did not get through examing and studying the contrivance until the bees stung every one of them, and in showing them how it was made, and how to handle it without injury, they stung him too!

Now it may be that all queen rearers use a block in which are bored *three* holes and that they put in *seven* bees, but we really cannot think they have been so careless, shiftless, or *slovenly* is the proper term perhaps, as to put in honey in such a shape as to soil the other mail matter or allow a possibility of the bees getting out. If the wire cloth was pried off by the clerks of course they could not blame the bees nor the sender; but as *we* read the postal laws a queen and a dozen bees can be sent for *two cents* as well as other merchandise, and if any kind of care is used in shipping, there can be nothing about them to endanger the mails or employees of the department. Mr. J. W. Winder of Cincinnati, makes a queen cage that we think might answer excellently for mailing, if he will add a secure cap to confine the bees and also to aid in preventing it from being crushed. Mr. Quinby sent us a queen a few days ago with no other food than a hard lump of loaf sugar and some water in a sponge; they seemed in excellent condition and we think the plan worthy of imitation.

So many prefer $\frac{3}{8}$ instead of $\frac{1}{2}$ inch space between the frame and the hive, that we have reduced the length of the arms to our metal corners $\frac{1}{8}$ of an inch, and all made after May 20th, will have arms $\frac{3}{4}$ instead of $\frac{7}{8}$ as heretofore. The change is so slight that no inconvenience need result thereby.

PROBLEMS.

NO. 12. Can bees raise brood without pollen if all other requisites be supplied, viz: Honey or sugar syrup, summer temperature, eggs, etc? Our recent experiments seem to indicate they cannot; for instance, we placed several weak colonies in our bee house during the late cold storms and warmed it with a stove to the proper temperature. Eggs were laid in abundance, but none of them were hatched into larvae until a warm day occurred, enabling them to gather natural pollen, this was quickly gone and unsealed brood was found; there came more bad weather and when the pollen was gone we had the same thing over again. Even strong colonies destitute of pollen, during the bad weather, had only eggs and sealed brood, although fresh eggs were found daily, none seemed to hatch *until pollen was secured.*

No. 13. "Novice" has so far "gone wild" on pollen that he insists on our offering a reward of $5.00 to the bee keeper who will give us a substitute at an expense of not exceeding 5c. per lb., that bees will use from an empty comb during bad weather and thus cause brood to be reared when desired. He reasons that one pound of pollen would produce more brood than ten lbs. of honey or syrup fed daily in small quantities, and the latter is certainly laborious compared with giving them a like quantity all at once.

We have tried the unbolted meal that they work on freely when they can fly out, but have never been able to induce them to use anything of the kind in the hive; but "Novice says, a comb of *old pollen* even will insure a comb of unsealed larvae immediately, and so his "last hobby" is PURE SUGAR SYRUP FOR WINTER DIET, and then in March or April, or whenever brood is deemed desirable, COMBS FILLED WITH POLLEN are only to be inserted to secure brood rearing up to any limit short of the number of eggs the queen can furnish, and observation shows that very few indeed of the eggs laid are allowed to hatch during the months mentioned. We do not think much brood rearing desirable before March, and cannot find it any positive advantage to have much brood reared very late in the fall. Who will get the $5.00?

ANSWERS TO PROBLEMS.

PROBLEM 9. We have had two pieces of comb from Mr. McGaw, neither of which produced any larvae, owing to the frosty weather during the time they were on the way we suppose. Mr. McG. writes May 19th, thus:

Your comb goes by way of Chicago, and it is several degrees colder there than here. In June, if you want a *virgin* queen, let me know and I will send you one, I mean free. I sell them at one dollar each, and guarantee safe arrival.

In answer to Problem No. 10, I use a hinge constructed as follows: Take four common screw picture rings with ¾ inch screw and about ½ inch ring; screw two into the upper edge of the hinge at proper distance apart, and two into lower edge of corner, so they will set close inside the lower rings and the rings opposite. Pass a round strait hard wood stick through the rings and you have a hinge that costs but a trifle and can be taken apart in a second. Will this do until you find something better? Yours, &c.,

SCIENTIFIC.

Thanks friend Scientific, your device is very cheap, (rings can be purchased for 40c. per gross,) and we think will answer every purpose. We would suggest smaller rings and a galvanized wire put through with the ends bent enough to keep them in place. These would be less in the way and we think will prove all that could be desired. One-eighth inch rings would do, and we shall think it a favor if any one can find a sample of such in the market and lowest wholesale rates.

◆

OUR bees *will persist* in rearing hosts of drones. It is true "Novice" slices their heads off; ("P. G." refuses, as she says, "'tain't in her department,") but is it not a great waste to get up drones for decapitation? We can, with considerable trouble, get comb enough all worker for a few hives, but the best will have some drone comb intermixed. Can we not have artificial Comb all worker? Will not some one put them in the market?

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advance: and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

PURE ITALIAN QUEEN BEES.—Send for circular and price list. Address J. SHAW & SON, Chatham Center, or I. E. DANIELS, Medina Co., O.

HONEY JARS.—One lb. per gross, $5.75; corks, 60 cts. Two lbs. per gross, $8.75; corks, 70 cts. One-quart Fruit Jars with Tin Caps, per gross, $9.50. Other styles furnished if desired. Address
NUNN BROS., Oberlin, O.

WANTED.—300 hives of bees to be used as nurses in rearing Italian Queens.
Address, R. WILKIN,
Cadiz, Harrison county, Ohio.

ITALIAN BEES.—We offer for sale about 200 colonies of Italian Bees in the American Movable-Comb Hive. Also Queens throughout the season. Purity and safe arrival guaranteed. For further particulars, prices, &c., send for circular.
BALDWIN BROS.,
2-9 Sandusky, N. Y.

"NOVICE'S"

Gleanings in Bee Culture.

1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., JULY 1, 1873. No. 7.

STARTING AN APIARY.

No. 7.

KIND readers all, if you have followed us thus far you are probably now ready for business, and to confess the truth, we prefer during the extracting season that you stand beside us and help us decide upon the best plan to "*run*" it, now that we have you fairly started.

In the first place, those of you who have, like ourselves, been in the habit, until recently, of having the hives some distance from the extractor, have of course been accustomed to removing all of the combs from the hive and then taking them, at one load, to be emptied. Now it seems to make but little difference whether the bees be left destitute of combs until they are returned or not, for we believe they always wait patiently for them, or whether the set of combs from the previous hive be given them.

It would seem that the latter course would send them to the fields again sooner, and we are quite certain that it makes no difference to them whether they have their own combs or those from another hive, and as a considerable amount of labor is saved the operator, we shall recommend the latter.

The objections are that very soon the identity of any hive of bees is lost, and you have no particular choice stocks to show visitors, for all hives contain hybrids or Italians, just as it happens, and there is some danger of throwing a quantity of brood and eggs under the care of a colony too weak to supply all their wants.

With the "hexagonal plan" of the apiary each hive is so near one of the doors of our bee house that the work is not very great if two combs be taken from the hive, carried in to be extracted, and two empty ones brought back; when robbers are not troublesome this plan is very simple and does very well.

The nearer our bees become pure Italians the greater is the difficulty of removing them from the combs, for the harder heavy combs are shaken the more persistently they seem to hold on, and brushing off a large number with our bunch of asparagus tops is slow business. Now comes the point where we want "head work." If we take two combs from the upper story first, and shake and brush off the bees, the same ones will need to be "got off" again, and still again; which is a troublesome process, besides being almost too much even for the patience of Italians. If they are shaken in front of the hive, as we did formerly, they are a long time getting in. The thin honey is thrown on the ground and door-step, and attracts robbers, and the danger of losing the queen is greater than when they are shaken on the top of the frames or directly into the empty hive. Lifting the top story off and doing the lower one first partially remedies the difficulty, but Novice says although he can carry "stoves," etc., when necessary, he don't "hanker" after the job of lifting an upper story full of honey and setting it down "somewhere" carefully if it can by any means be avoided, besides, bees that have been "well brought up" and behave well when handled in the ordinary manner are almost sure to "kick up a row" when divided in this unceremonious way without recourse be had to smoke, and we cannot think smoke necessary at any time during the honey season.

"Well, Mr. Novice," says "P. G.," "what *would* you have? It seems you can never be satisfied."

"I would have an extra set of combs for the first hive, which should be slid its length backward and a new one put in its place containing these combs. Now all we have to do is to shake the bees into this hive, and they can proceed with work at once. When all the combs are out, slide the hive just back of this (at the next trellis) back, put the empty one in its place and proceed as before."

"But, Mr. N., quite a number of bees will remain in the empty hive, and possibly the queen: these must be jarred off, and then, when the combs are emptied, they must be put somewhere. Why not carry the empty hive into the house, and then I can arrange the combs ready to be placed on the stand at once."

"Yes, I have thought of that; our "Simplicity" hives could be carried in that manner very well, but as most of the hives are the old style Langstroth, 'twould be rather laborious. Again, we could not slide the former back on their stands as we have them arranged as well as the latter. If one was 'big and strong' and 'felt so' all the time during this hot weather, the combs might be placed in an extra hive after the bees were removed, taken in and extracted, then placed on the stand of the next, moving that backward as we have mentioned.

This would make less steps and would expedite work considerably, but would necessitate carrying an empty hive, or rather one story without cover (covers should be loose for this purpose), in doors and out continually.

I presume friend Blakeslee's railroad would solve a part of the difficulty; but I can hardly fancy I should like the idea at all of having extractor, barrel implements, etc., perambulating about among the hives."

"Nor I, either, Mr. N. Our bee house, as it is now, since we have two doors, painted, etc., is nice and convenient, and I wouldn't want to be pushed about in a car, no how."

And now, fellow bee-keepers, having shown you just the quandary we are in at present, we should very much like to hear from each and all of you on the subject; give your plans and ideas, that we may compare notes.

If the "railroad" solves a part of the difficulty, Adair's "*Long Idea*" hive would solve the other part, but only at the expense of having double the amount of cover and bottom board for the same capacity as for a two-story hive, and being obliged to carry all the hive or none indoors to winter, and having no place to keep our extra combs secure unless they are all kept in the hive the year round.

"P. G." remarks that "extracting honey *by the ton* is a laborious operation any way we can fix it," but we know it can be so managed that many useless steps may be saved and much heavy lifting avoided. It must be done at a season when labor commands the highest price; few can be hired to work thus among bees at all, therefore it is of the utmost importance that we economise in the ways we have named. We think in our own apiary, as it is now arranged, two tons of honey can be got ready for shipment with as little labor as was required three years ago for one. Our barrels are made for us by a cooper who keeps bees, and so knows how they should be made. They hold about forty-four gallons or about four hundred and sixty or seventy pounds, and cost us about $2 each, transportation extra; they are strong enough to ship safely anywhere when waxed.

Several have written us that the beeswax may be half resin and answer equally well, as it can be purchased for about five cents per pound in quantities.

P. S.—Mrs. N. thinks we had better advise our friends not to go off and leave the resin and wax while melting, for it might "boil over," and also, when on the hot stove, it *might* take fire, besides the mixture might get on divers household utensils and fabrics from which it is loth to quit its hold, unless some one like Novice, who has studied chemistry in his earlier years, should happen to be around to inform the "distracted feminines" that benzine dissolves the waxes and resins as readily as hot water dissolves sugar. Not that *we* have had any such trouble—oh, no—but then considerable trouble might happen in getting the "pesky stuff" off the stove before it takes fire and burns up the culinary department.

P. S. No. 2.—Novice, thinking it ought to have a good "bile," so that so much wouldn't stick to the barrels, left it and sauntered off to look at the grape vines; after he had concluded that it would take them until the middle of July to recover from the effects of last winter's severity sufficiently to present a good appearance for the photographs, his attention was called by the cries of the women and dense clouds of black smoke rolling quietly over the "simplicity" bee hives. Of course his "chemistry" made everything all right, but Mrs. N. thinks practical experience would give a more vivid impression of the "stickativeness" of equal parts of resin and wax than anything the books tell about.

I GUESS that the man who "raises moth worms" does it for the same reason that I try to make all the weed seeds in my garden sprout and grow (by stirring the ground occasionally during warm weather whenever there is no crop on it) in order to get them large enough to see them, so that I may have the pleasure of killing them. Am I right?

When a swarm of bees have already enough honey to keep them till flowers bloom, how much honey or syrup should be fed daily to stimulate them to breed during March and April? Is it necessary to feed daily?

JOSEPH SINTON, ITHACA, N. Y.

If eggs of the moth retain vitality during the winter as seeds of weeds do, your plan would answer, but we think they do not, and that they only survive the winter that are in the combs with live bees. Will Prof. Cook tell us if we are correct?

Our "Editorial Corps" are divided in opinion as to whether feeding is of *any* benefit to stimulate brood rearing when a colony has plenty of stores. Novice says that when you want brood you *must have* pollen, that daily feeding is only a bother to both bees and owner.

CHEAP HIVES.

SINCE first describing the cheap form of Langstroth hive in the *American Bee Journal*, in our "Gleanings," many comments have appeared in regard to it, and most of them, we believe, take the ground that because it is cheap, it must necessarily be small and inefficient; we think our readers, however, have understood that by using two or more as may be needed all the room can be furnished that is required, and it can be done also simply and expeditiously. For large amounts of box honey it had better be made double width as we have explained before and this also admits of spreading the frames out horizontally. The covers in this case will be better, made of two, three, or even four boards; and instead of matching we would saw in the edges of the boards to be joined, with the buzz saw about half an inch, by raising the table to the proper highth, if the guage be set properly, by reversing the board we can by two or three saw cuts make a nice groove 3-16 by ½ inch in debth. Now saw a strip from our ⅞ lumber 3-16 in thickness to be driven in the slot thus formed between the boards of the cover, and we have a joint much less liable to leak than the one formed of matched lumber.

The objection raised that the "Simplicity" or "dollar" hive is not ornamental we shall perhaps be obliged to admit, yet where they are painted some light color and grapevines be trained to shade each one, as we have advised, we think them pretty enough. (They should *always* be painted and the color if not white should be light enough to prevent their absorbing too much of the heat of the sun in hot weather, as dark colors always do. With our arrangement of the apiary we should also have them all *one* color).

So many seem to think a projection of the cover necessary, and almost entirely on account of the "looks" that we will enumerate our reasons for preferring none. First and formost it would add considerably to the weight of each hive; and we particularly wish our hives for facility in handling to weigh not one ounce more than is absolutely necessary. Secondly, they would occupy more room, in the house, in shipping (by wagon especially) or when piled away full of empty combs, or when put aside for any purpose until wanted. We presume most bee keepers have had experience in shipping hives or bees of the annoyance caused by the projecting covers "jostling" each other, knocking tops loose, etc., etc. Thirdly, the tendency to warp is much greater with the projection, and 'twould be quite difficult to "let the cover in" to the frame that holds it to "cross nail" as we do, and thus prevent the possibility of warping. Fourthly, the expense for projections on fifty or one hundred hives is quite an item, and further we should find it difficult to get boards of such width that a single one would make the cover as it does now easily, for either the Langstroth, Gallup, or American hives. Fifthly, we could not well have them made bottom and cover one and the same thing and so that the bevels fit exactly, close and tight, no matter how they are piled up, hives alone, covers alone, or both together.

We have just sent Mrs. Tupper an American hive made "Simplicity" fashion or rather a Simplicity hive made with frames just one foot square, and she writes us she is so well pleased with it that she has a man at work making twenty like it.

This hive is even easier to make than the Langstroth because all the boards used are of one width, viz: 14¾ inches finished, and cover and sides are of the same dimensions, so that we simply cut off from a board 15 inches wide or about that, three pieces 16 inches long for sides and cover and two pieces 13¾ inches for ends. Now make all to an equal width (14¾) and rabbet out ends of *side pieces* (frames in this hive go crosswise) and cut off strips to go around the cover with machine as described and illustrated in our March number.

Hinge the cover on one end and make the entrance on the same end, and *we* should advise having the entrance with this hive fronting the south and let the bees go out directly under the grape vine trellis, thus giving them unobstructed flight even while we are making examination.

With a circular saw and power, and nice, well seasoned pine boards dressed just ⅞ thick, we know of no nicer and more profitable "fun" than making just such hives for $1.00 each, but if you want really to enjoy it, please be careful in adjusting your guages and don't make mistakes. "Be sure you are right then go ahead." The above hive takes ten frames just 12 inches square outside dimensions, and when the hive is worked two story, if we have a prolific queen, it works beautifully, better than the "Gallup" hive to our notion, and we used both last season, but we hope both Mrs. Tupper and Mr. Gallup will excuse us for disagreeing with them in preferring the standard Langstroth frame for rapid brood rearing. However, had we an apiary all of American hives, that is, frames one foot square, we presume we should use them so, but we would certainly transfer them if we had the old kind of frames which are still deeper.

So great is the inconvenience of using more than one sized frame that we have this present week transferred both our Gallup and American hives to our Langstroth frames; not that these hives did not do well, but that we were obliged on their account to keep an extra extractor standing around. 'Tis true we might use one that would take any sized frame like those now in market, but in our opinion this is a grievous error; worse, far worse than making *heavy* and unwieldy, hives, for the speed required to throw out the honey tells, even on superfluous ounces or fractions of an ounce.

As we have our apiary now, every comb goes nicely in our light extractor and we can work on, until a barrel is full, smoothly without being called on perhaps while a hive is left open, to get out another extractor or to lift up or strain honey, or any such "foolishness."

'Tis true we have one "copy" of the Quinby hive but this is not to be extracted. Their combs are full and sealed, and one of our very best colonies is idling away their time preparatory to commencing in the thirty-two boxes; but as they were partly filled with comb last season, we hope to see them finished this, and the extra price of box honey will, we hope, make up for loss in quantity.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, July 1, 1873.

HAVE sold one barrel of honey for 15c. per pound.

◆

We *too* are rejoicing now in copious showers, but honey don't show more than three pounds per day yet.

◆

IN heads of grain No. 66 read "*thorough*-bred" instead of "*rough* bred."

IT seems to us that with our present facilities we can expect little from drones unless we can keep a strong colony rearing choice ones in large numbers and decapitate them in the balance of the hives, and even then, where common bees are kept considerably, it has seemed to us they were almost sure to "mix in." However Italians must soon begin to preponderate (we hear they do in many localities), and then Italians will be the rule and blacks the exception. Rear all your queens persistently from one having the most desirable points; get your neighbors to do the same, and *thoroughbred males* will be sure to be the result.

JUST before going to press Novice wishes us to add, that after many experiments he would extract from the upper story first, replacing combs as fast as emptied, keeping quilt over them if robbers trouble. When finished, let them remain until you have done the upper story to the next hive in the same way, this will secure most of the young bees out of the way, from the lower combs (see problem 5) and they are most difficult to brush off. As the upper story is lifted off when empty 'tis much easier, and we should use the quilt over the combs as fast as they are replaced.

If hives are far from the extractor a light frame of pine sticks covered with cloth to keep off robbers is convenient. Leave the top loose, except at one side, so it can be thrown over the combs, and spread a sheet of paper on the bottom to prevent honey dripping on the floor. We know of nothing to brush off the bees equal to a bunch of asparagus tops, make it two feet long and bushy enough so that when simply rolled in the hand it will "roll" off "hybrids" without provoking their anger.

◆

IT is amusing to read letters from Missouri and Tennessee, saying it is so wet that bees can gather no honey, when we are parched and dried up here with severe drouth. An unusual number of bees seem to have worn their wings out, and we imagine it is because they are obliged to visit so many blossoms before getting a load. A friend who "bosses" the printing of this suggests that they "snapped their wings to pieces, they had got so dry;" but bless you, he don't know.

Our index scales show a decrease in weight of from one to one and a half lbs. between 6 and 9 o'clock a. m., while the workers are going out. From this time until 12 or 2 p. m. they just about bring the index back to its former position in the morning, and about one pound is gained from this until 5 or 6 p. m., between which time and dark it falls rapidly, making a total of perhaps 2½ or 3 pounds on an average. This is slow work and quite different from the proceedings of former seasons. As usual, the Italians do much the best, and our yield of honey is not far from 150 lbs. of very thick honey daily from our entire fifty-six colonies. (One more actually played out in the month of June.)

HEADS OF GRAIN FROM DIFFERENT FIELDS.

NO. 77.—The "setting of eggs" I received from you has hatched one queen, and she is a beauty. You do not advertise pure and fertite queens for sale: but what of it, can't you send a fellow one? The honey we are extracting now (white clover) is so thin that I fear it will sour. Do you use a Saccharometer to ascertain the degree of your honey? What degree will keep and what will not? Can you furnish me with one? I think Mrs. Tupper was very much mistaken when she said the extractor would injure the brood if properly used. Mine hatches all right. N. E. PRENTICE,
Castalia, O.

Thanks, Mr. P. We have very few reports of "eggs for hatching" that are encouraging unless it be where they have only been sent short distances.

Cool nights may have caused the trouble, and we not only regret the disappointment it has caused but will make good the amount sent us when it has been a total failure if our friends will notify us of the fact.

Some have succeeded where comb has been sent considerable distances, and if we learn the secret of success invariably, will try again all around.

No saccharometer is needed at all. Don't commence extracting until the honey is partially sealed, and no fear need be entertained of souring.

We have at this date (June 20th), nearly two barrels of the thickest honey we ever saw, probably on account of the extreme dry weather.

No. 78.—I have two queens left, one hybrid, with about a pint of workers, the other black, with less workers. Isn't this a glorious start for the first of June? Respectfully,
R. J. McKEE, Laingsburg, Mich.

N. B.—You will think I write like an old acquaintance. Well, having taken the *American Bee Journal* several years, may I not claim as much?

Bless your heart, Mr. McKee, and all of the other unknown friends among our readers, nothing gives Novice greater pleasure (no, not even *tons of honey*) than to hear from friends that have followed him through successes and reverses for years, and to hear that he has assisted and made brighter the lives of others, is an additional stimulus toward further experiment. He begs us to add that your letters are all read with the greatest of interest even if they do most of them go unanswered. In the attempt to have them all answered through this department, a pile has accumulated nearly sufficient for the rest of the year; yet we hope to get things in shape soon, that we may be able to give our opinion, at least, on all questions proposed, very shortly after they are received.

BEE HIVE COTTAGE, MILTON,
BRISBAKE, QUEENSLAND, AUSTRALIA,
No. 79. MARCH 22d, 1873.

Dear Novice:—You will no doubt be a little surprised at hearing from the folks on this side of the River, but you see you are no stranger even in this sunny clime. Your articles in the good old Journal have often cheered me up when I have been in a very low key. However I lost sight of you for two years after leaving England, and I began to think I should never see your name more. This is a splendid country for bees. No wintering here, the bees are on the wing all the year round. The bee is most certainly a native of the tropics. My observing hives are 2 and 3 feet square; containing only a single card of comb. I simply put a bar across the large frame to support the comb. The hives open on each side. I raise hundreds in them of queens. The bees are never taken out; the winter, if it can be called winter, is not severe enough to kill bees even in a one comb glass hive, in fact we have no winter. We can raise queens and have them fertilized at any time during the year. Do you want to know what I think of your new hive? Well, I have had timber cut for 200 of them, and intend to give it the following name: "NOVICE'S" "HIVE OF HIVES.'.
J. CARROLL, Bee-Master to His Excellency
The Marquis of Normandy.

Will our distant friend, if he *does receive* this number, please accept our thanks for his kind letter? Does he get *honey* the year round, too, and is the quantity per colony per annum after all much more than in our own land of frost, snow, rain and sunshine alternating? Verily, if Novice is going to be copied thus far, it behooves him to tread carefully in new paths.

No. 80.—Friend Novice:—In upper stories of the Simplicity hive, my bees fasten upper and lower frames together, I cut off all the comb between but it made no difference; can you tell a preventive. Also to make natural swarms as early as possible. Should I put on surplus frames as soon as the lower story is filled or does it make no differance.
E. W. POOLE, West Richfield, O.

We have more trouble in some cases than usual this season of comb being built between upper and lower frames; we suppose because the honey has been procured so slowly they have been averse to building in the frames, but preferred to lengthen out cells near brood and to build between frames over the cluster. After they can be got to work strong in both stories they usually cease to trouble in this way. Putting surplus frames above generally delays swarming but not always. Obliging bees to swarm for want of room is at the expense of a considerable loss of honey that they might otherwise gather.

No. 81.—Don't the bottom board become waxed up so that they are unfit for tops? If so what is the use of making them just like the top? Would not a plain board with slats on the ends be just as good? How much would you bevel the hives? Your descriptions are not plain enough for many people. As you move the hive forward on the bottom board, the back end of the sides raises some, which will give a place for worms, unless the bees wax it up, which they will be sure to do. Have you used your style of bottom boards long enough to know how they work? I hope your hive will work all right, for I like its simplicity and its general plan. Yours,
LA FAYETTE NORRIS.

We should seldom use one that had done service as bottom board for cover, yet we would make them all alike to avoid having an extra different piece about the hives, for instance, we might have in our apiary more covers than bottoms, or the reverse, and in making hives we should be obliged to get out an extra set of stuff for bottoms. We have aimed at "simplicity" and brevity. If bevels are made with the simple tool given in March number, no trouble will be experienced from the causes mentioned and we certainly, at this date, have no cause to change our decision.

◆

A FRIEND hands us a circular from N. C. Mitchell, 308 Race street, Cincinnati, O., from which we make the following extracts:

> We guarantee all our students who come to our apiary and remain with us eight days—long enough to take sixteen lessons in bee culture—can return to their homes and take from any good stand of bees they have, from one to three hundred dollars' worth of honey annually. There are some agents that can learn all, or enough to commence business, in two days, but all had better remain with us one week. No agent will be allowed to teach any one our mode of making artificial comb without our consent. They may sell hives and rights and everything else, but they must keep our mode of comb-making to themselves. The one that sends their money to us first is the lucky one.

Now if Mr. M. is equal to the task of managing an apiary of one hundred colonies, why don't he keep quiet and have an income of $30,000 all himself? We presume *he* could make them produce the highest figures, *of course*. If that would be too selfish and he is willing to share his *great discovery* with the world, why does he charge forty dollars for just two days tuition? (*Our* readers could all learn in two days if *any body else could*). Our Agricultural Colleges are certainly behind the times. Again, Mr. M. and several other advertisers should remember that there is no law by which any person can be prevented from teaching all they know it they choose. We don't know about our foreign friends, but we think our American Bee Journals are anxious to give every valuable process to their readers as soon as known, and the subscription paid entitles them to all, even if we "have spent days, months, and hundreds of dollars, to accomplish it." When we look over the old numbers of the *National Bee Journal* and notice the discoveries for artificial fertilization, etc., that would be sent for ten or twenty dollars and the queens that were to be given subscribers, we must confess to a feeling of doubt about who the "lucky" person will be. We have given Mr. M. the benefit of a free advertisement and propose to "help" all we can, if our readers will only send us all such circulars, emanating from any source whatever.

FROM ONE OF OUR FEMININE NOVICES.

I AM only a beginner. I commenced with one colony in 1871, in box hives, had three swarms; first one decamped and third one froze; they were wintering on their summer stands. In 1872 I commenced with two colonies, had three swarms, one of which lost their queen two days after hiving. I stopped them up (till they became reconciled, giving them two frames of comb with eggs, larvae and brood of all ages) a few days, and felt sure they would rear a queen; did not examine them again till they began to decrease in number, when I found they had no queen, but one or more workers laying drone eggs. I examined them very carefully and know they had no queen. Now the query comes, why did they not rear a queen; first, there was a failure in honey at the time; secondly, the laying workers might have prevented their rearing a queen. I have commenced using the Quinby hive and think it about as good as any. I obtained sixty pounds of box honey the past season; will entirely discard boxes in the future and use only an extension, or two story hive or both combined, so as to get the full benefit of the extractor. Owing to the bad luck, I have been forced to experiment with my bees this winter or lose my weak colonies. I commenced to winter them on their summer stands. Examined them December 24th and found my strongest colony in a box hive nearly all smothered and frozen for want of ventilation, the queen among the number. I obtained a queen from a swarm found in the woods, which was also nearly all frozen, being apparently dead, but after careful warming two or three hours the queen revived with a few bees: they were introduced to the queenless hive; making probably a pint of bees in all. They are now in the family room with another very weak colony that I have been feeding since that time. Both are doing well February 6th, and have commenced breeding. Noise does not disturb them in the least but the light does very considerably.

They become restless and uneasy when too hot or too cold. When I commenced bee-keeping I hardly knew a queen from a drone; consequently failed to make it pay, not realizing one-fourth the amount which I might have done. This set me to thinking how I might succeed better; so I began to post up in Apiculture. I got Quinby's Bee Book, Colman's Rural World, *North American Bee Journal*, A. F. Moon's Forty Years' Experience, and, lastly, Novice's "Gleanings," which, I hope, will be the best of them all, and think it fills a very important place. We need some one to criticise and expose the various humbugs. I intend to get everything else that I can on apiculture, hoping that by diligence and perseverance I may yet succeed and turn the past experience to a good account at last. In conclusion I would say to every beginner, *post up*, and thoroughly, too; get one or more of the best text books published, also one or more of the best bee journals. Remember that knowledge is power, and with this and proper care you will succeed.

ANNIE LARCH, Ashland, Mo.

As to why bees at times refuse to rear queens from brood, it is hard to decide. In some of our earlier experiments this was often the case, yet for some reason or other we have no such failures now. We have known a queen with bad wings to prevent cells being started time and again, and thus threaten the ruin of the colony until she was hunted out and killed. Miss Annie's example of perseverence is quite commendable, and well may she add "knowledge is power" in bee-keeping. By the way, we imagine her sex is as fond of power—*i. e.*, the power to command success—as the "lords of creation, even.

A GOOD WAY TO HIVE A SWARM.

CLIP the queen's wings; attach a Quinby queen-yard to the hive, and when they swarm the queen will usually be found moving about on the bottom of the queen-yard. Sometimes she will be surrounded by a cluster of bees. Cage the queen and place her at the entrance of the new hive, which must be placed as near the other as convenient. When the swarm is all out, lay a cloth over the queen-yard to prevent the bees from returning to the old hive, which you can place where you wish to have it remain, and liberate the queen.

J. PRATT,
Mallet Creek, Medina Co., O.

Quinby's queen-yards for an apiary of fifty hives or more would be quite an expense, and still more of a bother, it seems to us. If the ground is kept clean around the hive, as we have directed, the queen can be found generally with little trouble, without a queen-yard or anything of the kind.

◆

HIVES, Extractors, etc., etc., can, of course be sent cheaper as freight, but many do not seem to recognize that it is quite uncertain as far as time of transit is concerned. For instance, we should expect to get a bee hive from New York by express in at least three days, but if we ordered it sent as freight it might come in a week, but if it should take three weeks we should think it nothing very strange. Either way is safe, although we must expect that goods by the latter way may be exposed to rough handling and rough weather too, perhaps, and so they should be more carefully packed.

Where there is no immediate need of the articles, and they exceed 20 or 25 lbs. in weight, we should advise via freight

SHALL WE EXTRACT FROM THE BROOD COMBS?

THAT Mrs. Tupper, and in fact the *entire National Convention* fell into a grievous error in supposing the extractor injured the brood, admits of no question, but Mrs. T's further suggestion that nothing be gained by extracting combs containing brood is a point that might be considered. A case to the point has just occurred during the late dry weather.

Our index scales have shown a daily increase of two or two and a half lbs. per day, and Novice argued that spreading the combs by placing an empty one between them would secure all the honey until they were storing in the upper stories.

Recollect we were so fortunate as to have plenty of extra combs which is not always the case, but "P. G." strongly insisted that the better way was to go "right through" and extract them all in regular order or at least to commence in that way and stop whenever it seemed advisable. The result was that we obtained nearly two barrels as has been stated elsewhere and the brood combs were found so filled with honey that it was utterly impossible for the queen to deposit eggs with any kind of convenience, for even the empty combs placed in the middle were generally filled with honey and pollen.

The honey was found principally in bulged or lengthened cells around near the brood, and had evidently been stored and capped in a manner that was certainly poorer economy of both wax and labor than would have been the case had it been stored over the surface of whole combs. That the latter result can be secured, was shown by two hives that had been extracted about a week previously, and further still the index scales showed a gain of three and three-fourth lbs. instead of two the day after they had been extracted. Was not "P. G." right?

Again our friend G. W. Dean of River Styx this county, contends that a single story Gallup hive of eighteen frames will give as much surplus honey as two or more stories, and were it not for the fact that Mr. D. gets about as much honey per hive as any of us, we might feel surer that he had gone to another extreme. In 1870 he took 900 lbs. from the six hives that comprised his apiary, besides making several artificial swarms. He obliges his bees to build all worker combs by removing their brood to weaker hives when they try to build drone comb, and altogether he gets a fine lot of honey with but few, simple appliances and little labor; and now we have just got to the point, for he gets all his honey stored around the brood and makes it a point to have *brood in every frame* during the honey harvest.

Mrs. Tupper speaks of natural swarming at times when the bees were not storing honey or as she expresses it "when there is literally no honey to be expected." (See *Bee Keepers Magazine* for May.)

Unless the hive had been previously filled from an abundant yield, we cannot remember that we have ever had a case of natural swarming under the circumstances mentioned, and think at least they are unusual, yet we have seen colonies after they had got the swarming fever, that swarmed when every other frame was an empty one, and in one case they swarmed *with the combs spread over an area of several feet outside the hive* while we were extracting.

Now we still think that had their combs been faithfully emptied with the extractor as a preventive, they would never have had this swarming fever; however, Mrs. Tupper should know best for she has had much more experience with natural natural swarming, we presume, than we have, for our experience has been mainly with bees that were *not allowed to swarm*.

◆

Is there any danger of getting brood chilled so as to destroy it while transferring? It seems to me there might be although I think I have never seen any thing in print to that effect. A SUBSCRIBER.

We have never had brood chilled in transferring, but have known unsealed brood to chill when combs were lifted to the upper story too early in the season, but this only occurred when the nights were so cool as to be slightly frosty, causing the bees to desert the combs and go below. We have made no accurate experiment, but think brood could be kept out of the hive a short time, say a couple of hours, with a temperature as low as 40° and in warm weather, say from 60° to 80° brood will keep sealed up safely until it is hatched. Unsealed larvae would of course need feeding, but where well supplied with food, they will keep alive one day and in some cases two days, and we think very small larvae just hatched from the egg may be our best way of mailing comb for queen rearing, for short distances.

◆

IT has been observed, probably, that we advised bars of folded tin instead of wire cloth for our extractor. Further experiment satisfies us that tinned wire cloth is better, (as it mars combs less) which can be laid against the tin strips and fastened by folding the ends over the top and bottom bars. Wire cloth should be about five meshes to the inch of small wire. We can furnish the proper kind, both sheets, by mail for 25c., and the same will be sent without charge to all those having purchased Extractors of us, on application.

◆

ADVERTISEMENTS and Problems crowded out this month, as you see.

NOTICE.

IF there are any goods in this case that do not give ENTIRE SATISFACTION in every respect, you will do us a great favor by returning them at our expense.

We are so well pleased with the above —which came a few days ago in a box of goods from a first class business house in New York—that we have copied it here, and it expresses our sentiments exactly, only we should end the sentence by saying "tell us wherein we do not meet your approval."

We have abundance of complimentary letters in regard to our "Gleanings," which we forbear publishing because of "native modesty," for one thing, and that we can't see how such letters really assist our readers with their bees, for another; besides every one can see for themselves whether our paper is of value to them. Now the point is, we have had too few criticisms; we don't believe all are pleased with us, and those are the ones we should like to hear from. The same might apply to the simple hive we have recommended, and objections and even abuse has come quite freely from some sources, but none from those who have made and tried them. We are quite anxious to hear that the plan of making and using hives pleases others as it does us, and if it don't, wherein lies the trouble? but we *do not* value criticism from those who have never seen the article criticised.

We are glad to learn that many of our friends have rigged up saws and are doing a good work in making hives for themselves and neighbors. To aid our friends who wish to set up in the business, we copy a neat little circular received a few days ago:

DICKINSON PARSONAGE, Spring of 1873.

To my fellow bee keepers in Cumberland Valley, I offer a superior Movable-Comb Hive at about the price of the common box or chamber one. The box is of the style used and recommended by A. I. Root, Medina, O.,—one of our most successful Apiarians, and whose articles in the American Bee Journal, over the signature of "Novice" have done so much to simplify and popularize the whole business of Apiculture,—and well deserves the name it has received, "Simplicity Hive." Having built a buzz saw expressly for the cutting of this hive, I can sell it at a price much below the cost of production "by hand." Terms—"Trust" till September: then $3 cash paid by you, for the hive, or $3 paid to you for the bees—as you prefer. A. S. WOODBURN,

Dickinson, Cumberland Co., Pa.

HONEY COLUMN.

TWO barrels extra thick white clover honey, for which we want 15c. per lb. In quantities of 5 lbs. or less, 20c. per lb. If we can't get that price, we are firmly resolved to keep it "forever and ever." A. I. ROOT & Co.

"NOVICE'S" Gleanings in Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., AUG. 1, 1873. No. 8.

STARTING AN APIARY.

No. 8.

PRESUMING our friends have all succeeded in extracting all the honey that has been gathered, satisfactorily to themselves at least, thus far, we shall recommend now that steps be taken at once to rear queens. (We are presuming these remarks will reach you about Aug. 1st.) Whether we rear queens to replace those not sufficiently prolific or for making new colonies, we want just the *very best we can have*, and in giving directions for so doing we shall confine ourselves to such processes as are least likely to fail, and have been fully tested.

In the first place assuming that among bees "like produces like," we would ask every one of our readers to mentally decide which is his very best queen, i. e., which one invariably fills her hive with brood *early* in the season and as surely gives you a large yield of honey. At the same time we would have this progeny show the three yellow bands as an indication of Italian blood if possible, yet bearing in mind that when we are obliged to select stock to rear queens from our own apiary, we should consider it better to rear from a very prolific queen *not pure*, than to use a queen producing very light colored bees though not very prolific.

This advice may be qualified somewhat by those who very much fear stings. but as we are to "make the most money" at all hazards, we shall have to make stings a secondary consideration, and rest assured that you will all in time learn to fear stings but little. If you are so fortunate as to have a queen, *very prolific*, producing three banded bees, and these of a quiet disposition, too, consider her worth $25.00 at least, for we have found such queens quite rare; our most prolific ones oftenest produce cross hybrids. During poor seasons we welieve the full blood Italians invariably gather more honey according to their number than the hybrids, and to conclude we should dislike to rear many queens from a queen that we had not previously tested ourselves. We would have an imported queen if we could afford it, because we should then be sure of having a pure mother, but did she not prove prolific we should use some other, perhaps one of her daughters.

Having carefully decided on your *best* colony, we now wish you to point out your *least* profitable, in all points enumerated, i. e. diametrically the opposite of your best.

If your apiary contains fifty hives or more you can probably find one so poor that her head had better be taken off at once, no matter if she is pure Italian. Some, we are sorry to say, knowingly *sell* such queens, thereby doing much to deteriorate the reputation of the Italians, for all such stocks are sure to die out under the old order of things and are consequently never or rarely permitted to reproduce themselves. We should be very careful that we do not subvert nature by carefully nursing unprolific queens that would otherwise die before they could have a chance of perpetuating their poor qualities, simply because they produce three banded workers.

Assuming that introducing queens is *always* risky (we shall treat this subject in future) we will avoid the necessity of so doing by "swapping" all the brood combs of our first mentioned colony for an equal number from the latter. This should give us at this season of the year from fifteen to twenty queen cells, and you are to count them carefully in just one week from the date of making the exchange.

Now if you have in you apiary so many queens that are not *good ones*, remove and destroy them the same day that the cells are counted. A very plain test of what we call a "good queen" is to destroy all that are not working in an upper story at this date, presuming that had there been no more than a pint of bees April 1st, she should before Aug. 1st have made a good colony, and if she has not done this we would throw her away and try another. In two days more or in nine days from the time our cells were started we will insert a cell in each of the queenless colonies, and to avoid as far as may be, having it torn down, we would insert it in place of some one that the bees have started during the two days. For a simple mark to designate which hives we have made queenless we slip a grape leaf partly under the cover of the hive and the leaf is left there until the young queens are found to be laying, which we find to be in from six to twelve days after insertion of the cell. It may be objected that much time is lost in keeping a colony queenless thus long, but it is at a season of the year when *more* brood is generally of little account and the time is not greater, many times, than would be consumed in introducing a queen, besides, *our cells are built and queens are hatched in full colonies*, points which although they may not be absolutely necessary at all times, are certainly safe for "Novices." If your object be increase of stock, having queens already good, proceed for cells as before. Have your new hives, trellises, sawdust, etc.. arranged before hand and in place of removing queens take two combs, one of honey and one of brood hatching out, from each colony that can spare a swarm, put these with all adhering bees (but not the old queen) into the new hive and cover the top and sides of these combs with the quilt, insert cells as before and when the young queens are laying give them combs enough (without bees) from any old colonies to fill out the hive. These combs should be mostly brood combs, and thus we shall have full colonies at once equal to any of the old ones, and indeed, if the season continue, in a few days these *new* colonies can spare a comb or two for other new ones, but we should avoid having frames only partly filled in the hives for wintering.

Remember if we are going to try and winter all colonies without loss, they must be all good so far as combs and bees are concerned and most of all, a good queen. No matter about the honey so they don't starve before September for we wish to take it all away then.

Above all things don't let robbers have any hand in the business, whenever they get very bad you had better stop. "Novice" says you had better stop whenever they get so bad that a bee-veil is necessary, but "P. G." doesn't quite agree to that, yet she is getting a "way," this season of working about among the bees without any covering at all for the head, and with apparently the greatest unconcern. Even a "sting in the mouth" isn't the "terrible affair" now, that it used to be, and the swelling instead of lasting two or three days now lasts but a few hours.

By the way, dear readers, we will impart a great secret if you'll promise never to tell any one else, for it is worth a great many dollars (more or less). 'Tis a perfect preventive of robbers and you may open hives, leave them open, leave combs all around the apiary, and be as free from annoyance as if on a desert and "nary" bee to bother. If it don't do all we claim, money will be refunded. This is for our unfortunate friends who don't have fall pasturage. Well! Ahem! Extract the honey or whatever other work you may wish during warm, *moonlight evenings*. You will need to use considerable smoke to subdue the bees at first, and you will have to be careful of you lamp or lantern if you use one. Unless you are hunting queens, etc., you can learn to do very well by "moonlight alone. "(We mean "*only*;" "'tain't good" to be "alone.")

P. S.—Mrs. "N." says if she is expected to be assistant, she prefers some other "post" than holding the lamp."

P. S. No. 2.—We would advise all who feel disposed, to try the queen nurseries, but can only add that our opinion remains unchanged, viz: that to rear the best queens we would prefer that they have the full run of the hive as soon as hatched. Unfertile queens, we are inclined to think, would be of as little use to "Novices" as they are to strange bees, and we have found them very uncertain property, to say the least. We have succeeded well in making new colonies, as follows: Cut out your cells and place them in the nursery, with bees or without, it don't matter. A lot of queens cages fastened or suspended in a frame make a nursery; if pasturage is not abundant, some provision should be made in one end of the cage for the queen to feed herself. Hang the frame, cages, cells and all in the middle of a populous colony; remove the empty cells as soon as the queen is hatched to give her more room, and as soon as you can thereafter, release her among the bees on one of the frames of comb removed from the hive. Place this comb, bees, queen and all, between two combs of hatching brood from other hives, in a new hive and on a new stand. When she lays, fill up as before. You thus save some time and are not obliged to make your swarm until your queens are hatched and approved of. If you have more than ten or dozen cells a large colony will be required to give bees enough to each queen. It may not injure young queens to be kept caged several days, yet we do not feel satisfied that such a course is advisable.

◆

If your income from bees has been small, make your expenses in that direction correspondingly so. Many times 'tis hard to come down to rigid economy, but it generally "does a body good" after all.

◆

'Tis very *bad economy* to feed bees all winter and then have them die. Let us all resolve to attempt to winter no more stocks than we can probably take through. If all are now agreed that sugar for winter is as safe as honey, nothing will be lost but our time, in giving it a further trial, for the honey sells for the most.

INTRODUCTION OF QUEENS.

As many infalliable plans have been given for introducing queens perhaps, as for any other operation in Bee Culture, yet the great number of complaints that are continually being made of humiliating failures, seem to indicate success by no means certain with any one plan. Several points require consideration in the matter; for instance, we can afford to run some risk of losing a queen occasionally, rather than to consume the amount of time required for some of the methods given, such as caging the queen or keeping the colony queenless until all brood is hatched, or letting one of the cells hatch and then destroying the young queen after she has torn down the rest of the cells, and before she has become fertile.

We think Mr. Quinby favors one, or both of these processes, and it is true that queens will often be received this way when quicker methods fail, but as the danger of having queens die in the cage when they have been some time confined, is considerable, we cannot think it much advantage after all. We cannot think any of the plans invariably safe, such as scenting bees and queens with peppermint, tobacco, etc,, for a queen is often well treated for a few hours and then attacked and stung. In mid-summer confining the queen on combs of hatching brood without bees, is probably as safe a plan as any, and will do very well for a queen of considerable value, but as we must generally make a new colony to do this, and it takes considerable time, we think it cannot come into general favor, besides it is next to impossible to do this except in very warm weather.

Mr. Langstroth's plan is the one we think best, all things considered, and we shall make no additions to his directions only to say that no exact time can be given as to when the queen shall be liberated. In warm weather, during a yield of honey they can almost always be uncaged in about twenty-four hours, and we have sometimes succeeded perfectly in releasing the queen at once, without caging at all. We would strongly recommend Novices to experiment with queens of no value until they learn to judge by the behaviour of the bees when danger may be expected. Queens are more often "hugged to death" than stung, and where they have been released after being caged but a short time, or when the queen is very valuable we should always examine the hive after an hour or so, and again after a lapse of several hours. In early spring, or after fall pasturage has ceased, queens are most difficult to introduce; at the latter season we sometimes have them killed even after they have filled several combs with eggs, so we think it best to attend to all such work as early in the fall as is practicable. We do not favor stopping the cage with cloth, paper wet with honey, comb compressed in the hands, or any such means, because we wish to see the bees when the queen is set free. When they first become aware of the fact that they are queenless, the cage of the strange queen is generally densely covered with bees, sometimes knotted so closely that they can hardly be pulled apart; but if the wire cloth of which the cage is made, is of a mesh not less than ten strands to the inch, no danger need be apprehended to the queen. The knotted bees often make a buzzing sound, and it is never safe to release the queen before this buzzing has ceased, even if they keep it up for four days or a week, as we have sometimes known them to do. When she can be released safely, but few bees should be seen on the cage and these not excited and angry. Slip out the wad of paper that confines her as quietly as possible. and carefully note appearances. If they offer her food which she partakes of quietly, all is well, probably; but if they crowd after her and grasp her as they would a robber, pick her up with your fingers carefully and recage her. If a bee attempts to sting her while in your hands, you had better crush him; some smoke here is quite serviceable, and if you should get stung yourself, dont make a fuss about it until your queen is safely caged. Keep her caged until toward sunset the next day and try again. Sometimes it is best to destroy all queen cells after three or four days, if they "don't behave;" also removing all their brood, "does good" at times. If that wont do, take their combs away, and when you can't get them to have any queen unless they rear it from a cell of their own, console yourself with the idea that you are no worse off than some other folks have been occasionally.

If you wish to become an expert in such matters *keep practicing*; learn the conditions necessary for being able to take a frame of brood *bees and all* from one hive and place it in another without fighting. The matter is very easy, when the bees are in the proper mood, and it expedites work greatly, such as giving a colony choice brood wherewith to rear a queen and strengthening them up in numbers at the same time.

Bees are wonderfully tractable and yield to our wishes with the greatest good nature when we have learned just where and how they may be "imposed upon" with impunity.

◆

If we have decided to winter our bees on sugar syrup instead of honey, the only question remaining is, whether they have bees enough and a good queen, i. e. one that has proved herself prolific; and not whether they have stores sufficient.

◆

Send us all the circulars pertaining to bee culture you can, if you have reason to think they contain misrepresentations.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, Aug. 1, 1873.

OUR Quinby hive has again lots of bees but "nary" box honey.

◆

IN preparing to introduce Queens, remember that a hive *sometimes* contains *two*.

◆

Doleful. Novice's basswood Orchard is being eaten up by the Grasshoppers, but he declares "there'll be blood shed" before they finish. If grasshoppers made honey what tons of it our county might furnish.

◆

A. T. WRIGHT Chicago Ills. sells a very small pamphlet, recommending his patent hive, for 25c. He not only endorses sugar syrup for wintering but leaves Novice far in the shade in directing that it be fed to bees to produce nice box honey profitably. *Nice looking* comb honey can be produced it is true as our experiments in feeding last fall gave us ample proof, but in taste 'tis sugar syrup still, and worst of all 'twould *cost* a dollar a pound or more. It may be *right* for Mr. *Wright* to charge people for a "*right*" to make his closed frame "Coming Hive," but we don't think it *right* to charge 25c for the book. We Beekeepers work hard for our "25 centses" Mr. W.

◆

HONEY COLUMN.

W. H. SHANE, Chatham Center, 9 Center, Medina county, O., has 3000 lbs. nice clover honey, wants 16 cents for it.

I have 2000 lbs. (4 bbls.) of first-class extracted honey for sale at 18 cents. Barrels not to be returned.

R. WILKIN, Cadiz, Ohio.

We have about 1500 lbs. for which we want 16 cents. ("Raised one cent, 'cause honey's scarce.")

A. I. ROOT & Co.

ITALIAN QUEENS FOR $1.00.

IN our prospectus for "Gleanings," we mentioned that we should endeavor to test all improved processes before recommending them, but the very plain statements made in regard to sending eggs successfully by mail induced us to deviate so far as we did. The result, as we have found it, is that eggs may hatch and produce good queens when sent short distances only, but we have in no case known them to retain any vitality when two or more days were occupied in transit. Now, as we wish to make amends as far as we can for the disappointment, we will credit the parties who sent us money for eggs, the amount on something else, or will return the money if they prefer, providing the eggs were properly cared for as soon as received, and produced no brood.

Novice was so unwilling to abandon his project of furnishing Italian stock to the mass of bee-keepers at a small expense, that he could not give it up; accordingly on the 23d of July he rode about twenty-five miles on horseback visiting neighboring apiaries, with the following result:

We, whose names are placed below, will, after Aug. 1st, furnish Italian queens untested and unwarranted for $1.00 each, for the balance of the season. Queens will be reared from the choicest mothers we can procure, and will be shipped by express as soon as they commence laying.

J. SHAW & SON, Chatham Center, Medina Co., O.
W. H. SHANE, Chatham Center, Medina Co., O.
E. D. PARSONS, Lodi, Medina Co., O.
I. E. DANIELS, Lodi, Medina Co., O.
A. I ROOT & Co., Medina, O.

In regard to chances of the queens meeting impure drones, we would say that Messrs. Shaw, Daniels and Parsons have almost no black bees in their localities, and their apiaries comprise over two hundred colonies of choice Italians. Mr. Shane has not more than half a dozen black colonies in range of his apiary, and agrees to have these all Italianized if he has to do it entirely at his own expense.

As for our own apiary (we have now but few black colonies in our own neighborhood) we are diligently at work weeding out all inferior queens, and as we propose to rear all queens from a *well tested* queen, ours will be—well, good hybrids, the worst of them. Those from the first mentioned apiary, we think, will be nearly all pure. As the Postmaster General has decided that bees are not mailable, we recommend that queens be sent only by express, and many queen breeders think it much the best mode of transit for the future welfare of the queens. In case more orders are received than can be filled this season, the money will be returned. To have least trouble in introducing, orders should be sent as early as possible.

OUR PHOTOGRAPHS, AND A CHAT WITH OUR READERS.

AFTER waiting until the 17th of July for our grape vines to get "presentable," we now respectfully offer a view of "our home" to our friends, with the sincere wish that it may be of value to them, as the place wherein our "successes and reverses" of the past seven years have been made in the science of bee culture. In front of the bee house door, Mrs. N. appears so intent on having the "blue eyed baby" deport herself properly that she doesn't consider bee culture very much, and, in fact, in one of the best of the negatives, the Lombard plum tree in the fore-ground obscures her face entirely, which she excuses by saying, aforesaid baby had pulled her sun bonnet over her eyes and she was assisting her to extricate herself, for like all babies, she wanted "to see the whole performance." Miss Maud, and Master Ernest, (Novice Jr.,) of ages nine and eleven, stand at her left, and have demanded so much attention in time past in the endeavor to have their young ideas "shoot" properly, that Mrs. N. has never been, practically, much of an apiarist: besides, Novice has never yet succeeded in persuading her to get stung once every day during the season, or oftener, that she may get over the "dire effects" that follow from being stung only once.

"P. G." appears on the left of the picture and insists on being passed by without "note or comment," trusting that she may be able to assist in the cause of bee culture notwithstanding. Novice is so well known that nothing need be said of *him*, and in fact it is the *apiary* rather than the *dramatis personæ* with which we have most to do.

To digress a little: 'Twas but yesterday we visited the apiary of one of our subscribers who we hope will pardon us when he sees this. As he was away we took notes as follows: A very serviceable bee house had been built, but we did not go inside; around its door, some near, some more remote, were scattered hives of diverse sizes, shapes and colors. We believe none stood square east and west, or north and south, and we remember none that were perpendicular; a few contained bees, but more, none; those that did were so covered with grass and weeds that the poor little forlorn looking black fellows had to dodge and twist to get out or in. Many of the hives were made with much care and skill, but we fear our friend had become discouraged. American hives lay around all sides up, and the movable side seemed always anywhere but in place, whether they contained bees or not. A fine looking new hive made something on the "Adair idea," revealed when the cover was raised, nothing but a heap of dead bees and some shreds of moth-eaten comb. And this was the 24th of July.

How many of our readers have discarded or empty hives lying around; and we wonder, too, if they have ever resolved to waste no money or time on new fixtures and experiments?

Our friend's apiary certainly was not a pleasant place, and we fear he had avoided it for that reason, and because the season for honey here is very poor.

Now this is nothing new—it is almost an old story in bee-keeping—and we recognized it when we took up bee-culture. The plan of our apiary has been changed many times since we started it, and the hives have been changed, too, when 'twould have have been better to have "let well enough alone."

About five years ago we recognized the value of shade in the hottest weather, and planted sixty Concord grape-vines. They were planted according to "Fuller on the Grape," and the trellises were made as he directs. The vines did finely, but the arrangement of trellises, which can still be seen in the foreground of the picture, made rapid work with the hives very inconvenient; also eight feet between trellisses was farther than was needed between the hives, and so caused useless steps. With the present arrangement work is much facilitated, and we have as yet found no inconvenience from hives being too close. Each hive has a precise place assigned it, and the simplicity hive can be leveled up with a spirit level if desired. As but little ground is occupied, but little labor is requisite to keep it clean and free from weeds, which we think most important, for then rubbish is more apparent and you will be more likely to keep it gathered up. We first used the Langstroth, but soon was led to think the frames difficult of removal, and so made fifty American hives, besides trying a great variety of patent hives. Every *frame* now goes nicely in every *hive* in our apiary, we are happy to say. On the right of the picture may be seen our "spring balance," which suspends a moderate colony. So far we have not had more than two weeks that the hand on the dial has shown increase this season, and now it is going the "wrong way" at a rate that admonishes us to see that there be no colonies that may need feeding, for starvation may happen even in July and August.

In front of the "balance" may be seen one of the open sections of the "dollar hive," and we feel more than ever satisfied that nothing more cumbrous is ever needed in the shape of a bee hive; as to whether their appearance is so "very homely," can be judged from the row of them on the left. It will be observed that our old style Langstroth hive shows a back ventilator, these we have thought, from the experience of late years to be worse than useless and so have fastened them up permanently. If they are opened in hot weather they are soon used for an entrance and then cannot be closed again without loss of bees. Covering with wire cloth will not do for they will be soon covered with propolis. If all ventilation be given in front, as in the "dollar hive" it can be enlarged to any extent and then contracted without annoyance to the bees. The door in full view contains no window and perhaps one window may answer yet there are times when two might be better. We prefer windows in the doors, for then they are closed dark when the inner doors are in place in winter; besides if bees collect on the windows they are off at once when the door is opened. The hoe and spade left standing by the door are favorite implements with "Novice" especially this season, for many of our trellisses under the new arrangement were left "vineless;" these we find can be rapidly filled up by simply burying a long, growing shoot, an inch or more, under the ground and then bringing it up where wanted; these green canes take root in a few days. One thrifty Concord vine will make a dozen or more good, strong vines in a season. We have several such shoots that have covered a trellis with heavy foliage already. The "railroad" and car is but dimly visible through the foliage, and the extractor we hope will assist those who could not "make it out," even if it be but a distant view. The "camp chair" in the vicinity of "Novice," might suggest "taking things easy," but we believe he seldom uses it only on the Sabbath.

We would say, in conclusion, that no great amount of time has been expended, as some might suppose, for it has been mostly done at odd times, before breakfast, after supper, etc., and instead of being a task most of the work has been but a pleasant recreation.

P. S.—Of course our bees don't sting when they are well treated. ("It's a story." "P. G.") Mrs. "N." and the children wouldn't be there if they did, for *they* don't "take to stings."

◆

CAUSE OF DYSENTERY.

MY bees, twenty-four stocks, wintered on their summer stands, all healthy, but not strong in numbers as usual at the opening of spring, but some recruited. Their stores was almost exclusively honey dew. And now when I tell you I have been a bee keeper since 1863, in localities where this source of supply is often very abundant, and that I have kept on an av- from twenty to eighty stocks a season, and that I have never lost a colony of bees from dysentery, or any other disease that I know of, you will not think strange that I cannot indorse all the complaints laid to its charge. I have little however to say in its favor, except that it usually appears about this season, when in this locality, where we have neither white clover nor linden, but often as is the case this season, would have a hard season without it; it keeps the bees breeding and helps out wonderfully until the summer and fall flowers come, from which our surplus is principally gathered.

E. K. GIRD,

Appleton City, St. Clair Co., Mo.

That honey dew was not the only cause of dysentery, we have had ample proof, and we are glad to learn further that bees sometimes thrive on it. Every additional fact furnished will help determine just how food acts in this matter, for that food is at the bottom of the whole trouble, few now feel inclined to doubt.

◆

PROBLEMS.

NO. 14.—Queen's cells after being sealed, it is said, will hatch as well anywhere else as in the hive, if the temperature be right. What temperature is right? "Can't we send 'em by mail?" suggests Novice; but "P. G." says not, for they must not be "bumped" or roughly handled. Again, are all the requisites for extra queens dependent on the treatment of the larvae before sealing the cell, is there no development that requires full liberty, air, exercise, etc., after hatching? We dwell on this unduly, perhaps, but firmly believe that extra prolific queens are the secret of large yields of honey.

No. 15. In some localities our bees are in the habit of invading Groceries and Confectioneries etc. in the fall. Now is there any way to keep them busy so they will not annoy our neighbors i. e. can we feed them in any way that will not incite robbing? We know of one case where this was done accidentally as follows:

Quite a quantity of honey was hung up in a wood house in frames, and of course the bees began to carry it away, but for some unaccountable reason no robbing ensued. They worked at the honey until fruit trees blossomed, then abandoned it; commenced again after they were gone, and so on; yet there was no robbing at all. In this case it seems the abundance of the plunder made them think it was natural stores, but we have in vain tried to produce a similar result. We should like facts on the subject but would advise cautious experiments or it might result in a "big row" and disgust a whole neighborhood with bees and Beekeepers. The case mentioned was in Mr. Shaw's Apiary, alluded to elsewhere, and the bees were Italians. We are afraid t'would'nt work with black and hybrids.

No. 16 Has any one ever wintered a colony absolutely without pollen and did they rear brood successfully?

HEADS OF GRAIN FROM DIFFERENT FIELDS.

NO. 82.—Wax being scarce I used my grafting wax (Downings receipt 3 of beeswax, 3 of rosin, 2 of tallow,) for my barrels, which makes a tougher wax, less liable to crack and melts easier than wax alone. Mrs. Tupper was certainly wrong when she said that the extractor injured the young bees, my little girl turned so fast as to throw some worms out, and yet the balance hatched out quite satisfactory. You have left us "greenhorns" in a complete muddle about the best way of extracting. It is well I had got through before your July No. came to hand or else "P. G." would have scared me out. The only advice I can give is to get your extractor as near the hive as possible and then *go it*. J. B. TOWNLEY, Red Hill, Va.

We don't know why grafting wax is not just the thing for barrels. We are very glad that Mr. T. found no trouble from robbers in using his extractor close to the hive. We have this season had no day as yet that the yield of honey was great enough to induce them to behave so well. If each hive gave 30 or 40 lbs. of honey, as they should, Mr. T. would have to stop so often to carry in his honey that 'twould be a bother; and if he carried a barrel along, too, he would need Mr. Blakeslee's "car and tent". If his hives were none of them more than twenty-four feet from his bee house door, as ours are, would he not think it cheapest to have his extractor a fixture, implements stationary, and carry in the combs and return them?

No. 83.—I am going to ask a great favor of you, hoping that you will take the time to grant it. My cellar is not right somehow to keep my bees in. They mould and get damp, although we call it a dry cellar, and I have made up my mind that if you would take the time and give me written instructions just how to build a bee house that would accommodate 100 colonies and have it so that I can use it in the summer to extract honey in. I would repay you in some manner sufficiently to satisfy you. I want descriptions or specifications very minute and plain, so that a common carpenter and joiner could not err in building the same. I have undoubted confidence in you with regard to this building. We have long, cold winters here.

MARTIN H. ADAMS, Port Ann, N. Y.

It is a pleasure for us to be able to assist our subscribers in any way, and the subscription paid for "Gleanings" entitles all, to all the information we are able to give on the subject of bee culture. Were we to build again, we should make out a bill for lumber as follows. See plan of the bee and honey house in April number:

52 pieces for joists and studding, 2x12 inches and 10½ feet long. These are to be nailed together so as to form thirteen frames, 10½ feet square. The ends may be simply lapped at the corners on all except the two frames that are at the ends of the building. These should be let into each other so as to have the corner studs and outer floor joists flush with the outside of the building. This makes our joists for the floor and overhead and for the studding only one foot apart; but we think this none too near when we consider the barrels of honey that are to be rolled on the floor, and the necessity of holding our packing so it will not sift out.

Mr. Washburn remarks that 1½x12 stuff would do equally well for the studding and overhead, and we think he is right; for when boarded tight on both sides such a frame is very strong.

Your carpenter must manage, by some means to nail a floor on the under side of of the joists as well as above to hold the sawdust packing between the two. We accomplished this by raising the floor before putting in the uprights, so that a workman could nail on the under side. About a dozen more pieces will be needed for the studding for the gable ends, and these should be got out as long as convenient, for those at each side of the door had better reach up to the roof.

The rafters, twenty-six in number, may be 1½x4 and of such length as will be determined by the pitch of your roof. Ours projects one foot from the eaves, and the roof boards the same at the ends, so we have a one foot cornice all round. This, however, is more for taste than utility.

With the aid of our photograph, any carpenter would be able to construct the building without further directions, we think.

We have made our roof with rather a sharp pitch for convenience in storing the shelves and inner doors in the loft in summer time. The floor is to be packed with sawdust when laid, but all the rest is simply put in the loft and pushed over between the studding until full. As it settles in drying, more can be pushed in every fall before storing the bees inside, for several years.

As with extractors, each one must determine how much expense he can put in such a house, but we should always build, if possible, so that the house may be painted *sometime*, if not when built. We presume that a house could be built for $50 that would winter bees perfectly; but in that case it would have to be rough and plain. Ours cost about $200 complete. Before you decide you cannot afford a house for wintering, reflect that in case even as many stocks survive on their summer stands, we shall have to provide at least five pounds of food per stock extra every winter.

No. 84.—Don't make such sweeping assertions about feeding as you have lately. Remember you are a "Novice, as of old." Witness the loss of a stock in June, which, if it had been fed, *perhaps* might have been making part of the tons of honey yielded by the "Hexagonal Apiary." It strikes me that you have been running that "old windmill" at such a rate this spring, that the poor bees have often had to exclaim, "Ah! he is only a Novice! for he has not attended to us as he once did, and we shall have to give up."

P. H. GIBBS, Guelph, Ont.

Thank you, friend G., for frank criticisms. We are certainly still but "Novices," but not such cruel ones as to let any bees starve, we assure you, nor can we look back and see that neglect was the trouble, unless it was neglect in *mak-*

ing sure that each colony had *prolific* queens last fall. The stock lost in June was this way: Their queen failed in April or May, and to keep them up one from another weak colony was given them that failed also. Hatching brood, of course, would have saved them, but it would have been too much like dividing stocks under the circumstances, so we gave them a queen cell and they held out until not more than a dozen Italians were left, and these few guarded their *ample stores of sealed syrup* until none were left but the sentinels who stood guard at their domicile until the last. May we not learn from them a lesson of perseverance?

No. 85.—Judging from present behavior, my bees will only take advantage of basswood to raise more brood, begin more queen cells, and keep me continually anxious and continually at work trying to circumvent them. *If* between "plenty of pollen" and plenty of brood there *be* the relation of cause and effect, it is clear enough why they thus behave—for all the season through (thus far) there has been a *super*abundance of pollen stored. I I had a comb in one frame that as to contents was literally nothing *but* pollen at one time. I wonder if they don't make mistakes in this direction sometimes! I am sure my bees will never use all the pollen they store.
LUCY A. WILKIN, Farwell, Mich.

We hope our friend ere this meets her eye will have had ample proof that such a thing as *too much brood* is impossible, i. e. if there be honey to gather, and we have sometimes thought a powerful colony of Italians would *almost* store honey when there was none. If a colony should contain an unusual number of bees after the season of surplus we should make them raise queens and divide them in the fall into two or even three stocks. We should prefer that each stock contained plenty of bees however. (See preparations for winter in next number.)

No. 86.—I went to Kentucky three weeks since and brought home 85 hives of bees. I am now in a few days going to risk shipping 100 or more hives of bees to Gallup's neighborhood for the fall pasture. Will I lose the whole thing? The "Gleaning's system" is my hobby now. R. WILKIN, Cadiz, O.

May all manner of success attend friend W., although we have great fears that his project may end no better than ours did several years ago, viz: We carried a dozen stocks and set them in a buckwheat field where they made the air resound with their busy hum, but while they came near starvation, their companions at home had gathered nearly enough for winter.

No. 87.—I lost all of my bees last winter. Now I know of a swarm in an old box hive that I am going to get to-night and bring home. Shall I transfer them this late? I think it will do, but my wife tries to discourage me. What says Novice?
E. HUNTER, Manchester, Mich.
July 3d, 1873.

Transferring can be done at almost any season, but a hot day in July and the hive full of honey would be almost sure to result in a general sticky muss. Don't do it unless your wife agrees, and further more agrees to help. It is almost, woman's work, and if you and she both can save all the comb containing brood, and get them into frames without breaking the heavy combs of honey and having it run all about we shall think you both quite skillful. Save out the heaviest combs of honey for yourself unless honey should fail when you will be obliged to feed it back. Please report your success.

No. 88.—Your notion of making at least ten stands contribute to the making of one new one coincides exactly with my opinion. Honey and swarms don't go together. You practice on Bonaparte's rule—of having an overwhelming *force* at the right time and place.
Yours, &c., J. B. TOWNLEY,
Red Hill, Mo.

Thank you Mr. T. for the illustration. Could we have had "an overwhelming force" June 1st. in all our hives, we should have had more than only *one ton* of honey from fifty-six colonies: however should there be no fall pasturage, we feel impatient to see if we cannot do better through another winter. Twenty-five colonies with extra queens and plenty of pollen we feel sure would have done far better than the fifty-six.

No. 89.—Some time since I wrote you how I *thought* handles or recesses were cut in boards for the fingers, by the circular saw. I have just seen the arrangement, which is a saw about six inches in diameter with a wabbling motion; this is got by slitting a one inch pine wheel at an angle and placed inside collars. R. H. DIXON, Canadaigua, N. Y.

Thanks, friend D. We have never made any such cuts in our hives, because we have found them quite easy to handle by taking hold under the lower edge, (we never carry the bottom boards with them.) It has been said they would sting the fingers, but such has not been our experience.

◆

Photo. of our Apiary (8x10 size) is now ready to mail and will be sent on receipt of 30c. Or to any subscriber sending us one new name besides his own. Of course same names cannot be counted twice.

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

HONEY JARS.—One lb. per gross, $5.75; corks, 60 cts. Two lbs. per gross, $8.75; corks, 70 cents. Other styles furnished if desired. Address
NUNN BROS., Oberlin, O.

THE PRICE FOR ITALIAN QUEENS after the 1st of August, will be for
Tested Queens, $3.00
Warranted Queens, 2.00
J. SHAW & SON, Chatham Center.
I. E. DANIELS, Lodi,
Medina Co., O.

VERY CONVENIENT Queen Cages for shipping, introducing or hatching cells on the "Nursery plan." Printed directions pasted on each cage. Price 10 cts., or $1.00 per doz. By mail 2 cts. each, extra.
A. I. ROOT & CO.

"NOVICE'S"
Gleanings in Bee Culture.
1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., SEPT. 1, 1873. No. 9.

STARTING AN APIARY.

No. 9.

AS we are admonished to "in times of peace prepare for war," so we say during this month prepare for winter. It is our sincere wish that each one of our readers carry safely through the coming winter every colony they undertake to, and further more we are persuaded *it can be done* if the directions we propose giving are carefully followed.

If directions given last month were attended to in regard to having all queens prolific ones, we are all right on *one* of the great essentials. Do not undertake to winter any colony whose queen produces but a small patch of eggs and brood, for she will probably be only an expense if her colony does not fail outright in the spring; we want none but those that will go through *safely* and *surely*. Of course in "taking the measure" of a queen plenty of food must be on hand.

Having made up your mind what colonies are to be wintered, satisfy yourself by careful inspection that they have good, entire combs, and, if you have surplus frames of comb, choose none but the best worker combs; be especially careful that none are left in the center of the colony built half way down, for many a hive of bees have starved thus in severe weather because they were unable to get over to the remainder of their stores; if such combs must be used, place them on the outside as they would be built by natural swarms. Unless you can permit all the pollen to remain in the hives, gathered during the fall, make arrangements to give it back to them early in the spring. Considerable has been said about giving them for winter, one less comb, that more room may be allowed for the bees and that they may thus cluster more compactly. As we have had no experience in the matter, we cannot advise, but think with very strong colonies it could do no harm, at all events. We have never known a hive too *full* of honey to winter, for in our locality they always consume enough from the central combs to have plenty of clustering room before very cold weather.

We unhesitatingly advise all to extract all of the honey before giving them their winter supplies; our reasons are briefly: First and foremost, the great "bee malady" of late seems to be much on the increase, and localities where bees had for years died only from starvation, have suddenly been visited to such an extent that almost *none* were left; you may have always found your bees healthy, and yet the coming winter may take all. A list of reports seem to point out that neither honey dew, late pasturage, nor any other particular yield is the source of the mischief. Those who so confidently relied on sealed combs of clover honey gathered in June, seem to have had, many times, the very worst form of the disease. Secondly, we are happy to add, that in a "dollars and cents" view, sugar is enough cheaper to abundantly pay for the exchange; for the honey remaining now in the hives is generally the very thickest and best, and with us sells at 15c. by the quantity, and retails at 20c. We presume A. coffee sugar can be purchased anywhere in the United States almost as low as we get it, viz: 11c. by the barrel, and this will make the cost of thick syrup, fully as thick as honey, only a little less than 9c. per pound. Allowing one-fourth of this syrup to be consumed by the bees in eliminating the wax to cap it over, and we have total cost of sealed syrup 11½c. If the honey sells for 16c., there still remains 4½c. to pay for labor of extracting and feeding. If supplied with plenty of feeders, we could prepare the syrup and give twenty colonies 25 pounds each and do the work easily in one day, and $20 or over the amount saved in giving them syrup instead of honey, we think very good pay for a day's work.

HOW TO MAKE THE SYRUP.

Just in this way: Borrow your wife's wash boiler, and with it her advice and assistance; put it on the stove (the boiler,) pour in water, and put in sugar until a sample of the syrup, when cold, is about like honey. When you have made one boiler full, pour it into your extractor and start another. Don't let it burn, the *women* know how much it should be stirred.

We believe the syrup answers equally well if made of cold water and sugar simply stirred up, and the syrup poured off when the sugar has settled, but we cannot get it as thick by this method, and consequently it takes the bees longer to evaporate it to the point at which they decide it should be to seal it up. Last season we fed some that they kept in the cells nearly two weeks before they would seal it, but they wintered on it equally well, and besides, if we wish them to take it rapidly, it should be given them warm. In regard to cream of tartar, we would add about twelve teaspoonsful to every hundred pounds of sugar simply to prevent granulation of the syrup on our utensels, etc., while handling it. If you can get it into the combs and the bees seal it up before it has time to crystalize, it answers every purpose just as well, but to do this you must have all strong colonies, as in fact you should have any way. So many have succeeded without cream of tartar that we have no hesitation in saying it is not essential. Even should the syrup turn to sugar in the cells, it will do no further harm than the fact that they are very apt to waste it in the spring, when it is being consumed.

HOW TO FEED

don't matter, so you get it all sealed up as soon as possible. We think it will pay you to get your tinsmith to make you about one-fourth as many tea kettle feeders as you have colonies, and you can then probably get all through in three or four days, and where he makes a number at once they can be made cheaper. It is true a tin milk pan placed on top of the frames with a cloth laid over it does very well, and some of our friends say they work as rapidly, in warm weather. We prefer the tea kettles because they hold just about 25 pounds each, and when once filled and placed on the hive, that hive is done; besides, it can all be attended to without even daubing the fingers if you are careful. Have your extractor mounted on a box of the right hight to allow the gate to run into the feeder, place these when filling in a shallow pan, but *learn* to fill them without running them over; when the syrup is cool enough to allow your hand on the feeder, place them on the top of the frames of the hive. Before you have learned the knack of inverting them quickly, you had better carry along a pan, and hold them over that until they cease dripping. Above all things don't get robbers at work; to be sure that none of your feeders leak, try them all with boiling water before using them. Sometimes in soldering, a crevice is only closed with resin, and the hot syrup melts this out. If they will not leak a drop when inverted full of water, there is no danger, and after they have once been used they are all right for a life-time, even if made of the cheapest tin. Wash the outsides if you wish but not the inside. They will never get sour if thick syrup be always used, and when dried on, it prevents rust. The hive must be nearly level, of course, and this is a feature about the "simplicity" we like, for we always have them thus. A second story is always used in feeding, and one such may be used for several by turning back the cover until feeding is done, and then moving both feeder and upper story to the next.

HOW MUCH TO FEED.

Many experiments seem to indicate that ten pounds of sugar will safely carry a colony through the winter, but it is so easy to give them the whole amount to take them through until May, while we are about it, that we think such a course best, and we are fully satisfied that sealed combs of food is more economical and just as beneficial as any possible way of "tinkering" with liquid food in March and April. In buying the sugar, to be sure and have ample stores, we would calculate *twenty pounds of sugar* for each colony.

Some, of course, will consume more than others, and in April and May we should see that supplies are equalized with the two-fold purpose of supplying the needy, and getting syrup all used up, out of the way of honey.

Had not unscrupulous patent hive venders encouraged the idea that honey could be made by feeding bees sugar, we should not deem it necessary to state here that sugar syrup will always *be that*, and nothing more. Those who choose can try, if they like, to see how much it takes to build comb.

WHAT TO DO WITH FALL HONEY.

As we have never been so fortunate as to have a yield of honey here after the middle of Sept., we can only suggest a remedy. If there is no lull in the yield of honey during warm weather, it might be difficult to get them to use the syrup. Experiment will have to be the guide. When you get combs nicely filled with syrup, endeavor to make them store in comb given them temporarily, and these may be taken away, or combs might be filled at any time, and laid aside until all pasturage was over and then given them; and were it not for the danger of thus depriving them of all their stores of pollen, we should call this a very good way, and in fact we have made first-rate colonies by shaking the bees and queen from after swarms that were destitute, (obtained from neighbors of the "box hive persuasion") on a few Langstroth frames of sealed honey in December. As winter stores are safer than honey alone, even if only partly of syrup, we would advise those having box hives that need feeding to use the syrup by all means, and the same remarks will apply to those having no Extractor at command. If extra empty combs can be had, exchange all but the brood combs and then feed; if it can be so managed that the bees use their natural stores during mild weather they may do very well.

And in conclusion we will add, that to succeed you *must* feed early.

Our best results have been from those colonies fed up in September; Oct. if the weather is warm may answer, but colonies fed even in the fore part of Nov. have almost invariably been unhealthy. *Weak* colonies most especially are slow in sealing their stores, and these should be fed first, but a better way is to have no weak ones, for by exchanging brood we may equalize them to a great extent. We have of late had success in removing a comb of brood, bees and all, and in no case has there been quarreling. (Be sure you dont get the queen too, for that would assuredly be a loss.)

◆

IMPROVEMENTS IN BEE CULTURE.

MR. EDITOR:—In your article on the rearing of queens, in the August number of "Gleanings," you give very good directions for the improvement of bees by selection. But allow me to tell you that you consider the question only on one side. For it is not all to have prolific breeders, you should have also good sires. In this question, drones are as important as queens. If we allow nature to have her way, as to the production of drones for the fertilization of our queens, we will run the risk of losing as much on one side as we gain on the other. Indeed, if we let chance have a hand in the matter, we will be apt to raise drones, from the least prolific, as from the best. Besides, if we wish to produce pure Italians, we cannot do so unless we control the production of drones, for if there are any hybrids or blacks in the neighborhood they will be sure to raise a quantity of drones.

To prevent this, let us remove all drone comb (as far as possible) from every hive in the spring, replacing it with worker comb. Then let us choose the best or some of the best stocks and introduce one or two drone combs in the middle of the brood, early in the season, say in April. These stocks will furnish drones for our queens all the season. In July, when the bees begin to kill their drones, we should remove these combs containing drone brood and introduce them into some queenless stocks, kept queenless for that purpose. Care should be taken that the drone-breeding queens be not of the same family, or at least not too closely connected, with the queen-breeding queens, in order to prevent in and in breeding.

This removal of drone comb in the spring, which seems at first very tedious and long, is easily performed with a little patience. It can also be attended to with advantage when extracting honey.

A few more remarks and I am done. We never kill the queens of the hives in which we want to introduce queen cells until the tenth day in the morning. We introduce the queen cells in the afternoon; this leaves the hive but a short time without a queen. A beginner, however, had perhaps better remove the queen a little earlier.

I also find fault with your way of making a queenless stock, by putting a leaf partly under the cover. By that way, if you have a large number of hives, you don't know the date of the insertion of the queen cell and may have to inspect the hive several times without result. On the other hand, if a young queen gets lost, you are not aware of it in time, as you do not know when she should be laying, unless you can remember the date. For this purpose and for all other matters pertaining to the apiary we use black-boards on every hive. They are made of ¼ inch boards, 3 by 5 inches; on one side they are painted with *patent liquid slate*, to be had in any of your large Eastern cities. The other side is painted white, with the number of the hive on one corner. These boards are fastened behind the hive by a small tin holder. When the hive is queenless we write the particulars and date on the board and turn the black side out. When the queen lays we mark the date of her beginning to lay and the year in which she was born, and turn the white side out. We thus know the age of every queen, her pedigree and in fact all the particulars about the hive, by referring to the black board. In summer we also keep a large slate on which we write all the work to be done in the apiary, introduction of queen cells, inspection of young queens, removal of hybrids or unprolific queens, &c., &c. When Mrs. Tupper visited our apiary, some two years ago, she was struck with the ease and facility afforded by these black-boards and adopted them immediately. Since you seem to make it a business of furnishing cheap apiarian supplies, could you not manufacture these boards, with tin holders for the benefit of your readers?

But I notice that my "few remarks" are degenerating into a long article, I will therefore close by declaring myself one of your admiring friends,

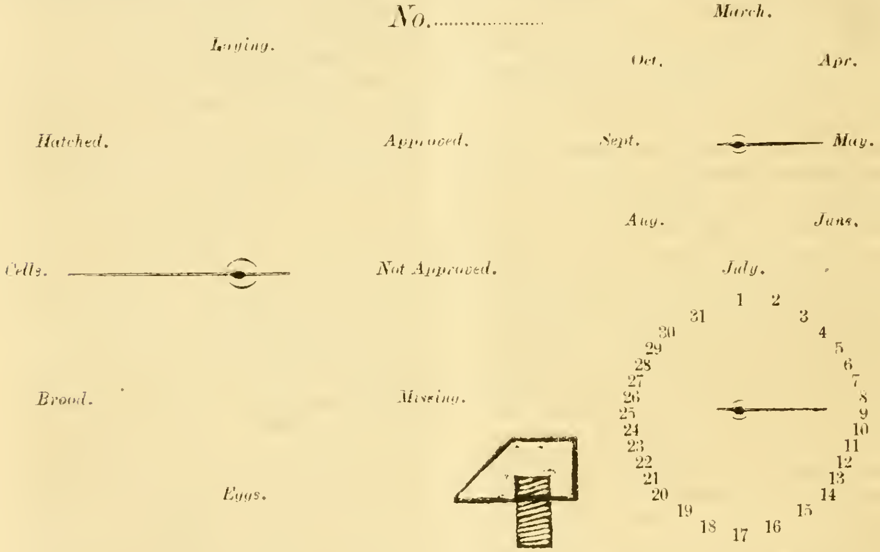
C. P. DADANT, Hamilton, Ill.
August 7, 1873.

Many thanks, friend Dadant. We saw the advantage of rearing choice drones, also, but feared to confuse some of our friends by giving too many directions at once, and we still insist that if all queens reared are from choice or pure mothers, we shall in time have far better stock than at present. Natural queens or queens from natural swarming are always hap hazard stock, and should not be tolerated by any one having the least desire to receive the benefits of the Italian race. In regard to keeping a stock queenless two days, we do not see as it matters much in July, August or September, but we must confess that we have had so many cells torn down of late that we are not satisfied that inserting cells at once as soon as the old queen is removed is not almost as well. (See queen rearing on another page.) In regard to the blackboards, we were "deep" in a similar device when your article was received, and it seems from the *Bee Keepers' Journal* that Mr. Winder, of Cincinnati, has been working in the same direction.

Now our device came about mainly as a matter of necessity, for Novice has been having a touch of partial paralysis in his right side again, and any kind of writing was almost out of the question for a few weeks. He could raise queens—or at least thought he could—but when it came to even keeping a record of queens or anything else—well, he submits the following, which is supposed to be printed on stout weather-proof card board, such as is used for shipping cards:

If, on our next visit, we find her again, and she should be laying, we set the indices to read "laying—Aug. 25th," and thus it remains until we can judge whether she is prolific, and workers three-banded; then we move only the index to "approved," and thus it remains until she is sold or fails from old age, when we set it "not approved." If we remove her it may be expedient to give the colony either eggs, brood, or cell for replacing her, and we indicate which and date. If we give them a virgin queen, call it "hatched," if killed, call it "missing," and "blunder away," for you know as well just "where you are" at all times as did the man who tried to yoke a pig. When "piggy" made his escape by jumping through the window of his shop, he consoled himself with the ejaculation: "Drat it, I've got his dimensions any how. *Seven by nine, exactly.*"

There's nothing like system and precision, and as we always sell everything we consider of value, we have ordered a large number of these cards or dials



At the centers are affixed a thumbscrew, with a point projecting at one side for an index. These are made cheaply by soldering a piece of galvanized sheet iron, (shaped as in the accompanying figure,) in the head of a small wood screw; these screws should also have their heads tinned, to prevent rusting. With four tacks of galvanized iron, fasten the card on any conspicuous part of the hive. Make a hole in each of the three centers such that the screws will turn in and hold firm, but yet turn easily. An explanation is hardly needed, but we will give one illustration:

Suppose we are examining a hive, to see if a young queen has commenced laying, and she can't be found, before leaving we turn the index on "missing," and the other two are made to indicate the date, whatever it may be, as "Aug. 22d."

made, and think we can sell them for about one cent each. If we can afford them cheaper, will say how much next month. The screws and tacks we will furnish until further notice for each card for 1c., making the whole cost of our Queen Index for each hive five cents. They can probably be sent by mail at a cost of about two cents for four complete set. The cards can be mailed at printed matter rates, and we will pay the postage when one dozen or more are ordered.

◆

WE acknowledge with thanks the receipt of many valuable articles, items and queries, and much regret that want of space forbids considering them at once. The printers inform us that the matter we have sent in would fill at least another number. Editorial also crowded out.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, Sept. 1, 1873.

ITALIAN QUEENS FOR ONE DOLLAR.

PERHAPS some apology should be made before submitting our plans of queen rearing to many who have had so much more experience in that branch of bee culture, yet hoping we may have struck on some few ideas of value somewhere, we as usual *try* to help whether we do or not.

In the first place, kind reader, we found our hives about the middle of July running over with bees, almost, and a very poor prospect of any honey to be gathered during the balance of the season. In some of these the bees actually hung all day on the outside of the hives and we, Yankee like, kept reflecting whether these bees could not just as well earn something, for, without a doubt, should we remove their hive and give them a new one with a small piece of choice brood, they would rear queens at once. As this would necessitate making a new colony and the attendant expense of extra stores, we disliked the plan, for, if we preferred wintering only our present number, we should have before us the tedious process of uniting when through. We finally thought of using the surplus bees to rear queens in the upper story and have succeeded so well in getting queen cells started thus, that we have been wondering if the loafing bees are really not *superior* for this purpose.

One colony produced *forty-six* fine queen cells in the upper story immediately, on having all communication cut off from below; and we have, as a general thing, had more and finer cells built above than in the main brood appartment. As our quilts did not make a 'sure thing" between the two stories, we also interposed a thick sheet of Manilla paper, making the entrance immediately over the main one, on the roof of our old style Langstroth hives, and we put on an extra door step on the upper story of the simplicity hives. When the two colonies are again united the scent being the same we have nothing to do but to close the upper enrance and shake the bees below. As we have quite a number of hives that have not worked above, we have divided these by a sheet of tin, boards being two thick and clumsy in our opinion; we give the old queen all the hive except three frames, these being sufficient for queen rearing, and in some cases we have given the nucleus the old entrance, obliging the main colony to use a new entrance in the back end, for we wish to afford the young queen every facility for returning without any mistake from her excursion. As sheets of tin are somewhat expensive we have employed old tin ware to good advantage; for instance an old wash boiler flattened out and cut up in pieces of the proper size, with the wire left on the top edge for the quilt to rest on, answers every purpose. Wire cloth will not answer or at least not with certainty, for no queen cells will be built so long as communication can be kept up between the two colonies. The crevices at the entrance and on the rabbit where the frames rest may be closed with wool or small rolls of woolen cloth. If we have one choice queen to rear from, we should give them, after they are fairly started, only brood from this queen, and by cutting the the comb in small strips this brood may be made to go a great ways, thus having all queen cells started, valuable ones, and much progress will be made on queen cells while waiting for an inserted cell to hatch. If the cell should be destroyed they, of course, are rearing good ones in its place. Now comes an important item. Although we may insert a dozen cells and have them all hatch properly, the next dozen may be nearly *all* torn down, and to prevent this we have been using the queen cages advertised last month, which are made as follows: In blocks two and three-fourth inches square, cut from boards dressed to ⅞ inch in thickness, bore holes two and ⅜ inches across; these, we bore with an expansion center bit made very sharp: if the blocks split badly bore the holes first and saw them out afterward. On one side with four tacks fasten a piece of tinned wire cloth about sixteen meshes to the inch; on the other, make a door by bending a square of wire cloth over a square frame of rather stout wire; hinge the door by driving staples made of common brass pins over the wire on one side of the door. A third pin driven in the wood at an opposite corner and bent at right angles makes a sort of button to fasten the door securely.

Now then, with a populous colony, in warm weather, we have only to put our queen cell in this cage and lay the whole on top of the frames, for the heat from the bees passes through the light wire cloth, and when covered by the quilt it is kept abundantly warm. With weaker colonies we cut out a place in the comb, and this comb, containing a queen cage, can always be carried to any hive in which it may be needed. As the cage contains ample room we may allow the queen to remain in it a few days if the colony has queen cells not quite ready to remove.

Again fifteen of these cages just fill a Langstroth frame, and when fastened with transferring clasps or some similar device until the bees wax them fast we have a very convenient nursery, just as good as if it was patented. The whole could in fact be made of one piece of wood if preferred. While bees in with the cells are not positively necessary, we should always put in a few unless in cutting the cell apart some of them get cut open. And here is a point new to *us* at least: In cutting apart three cells built all together we supposed the central one would have to be destroyed, and we cut out a white queen, without wings or even legs, hardly; at a suggestion from P. G., the embryo queen was laid on a leaf in one of the cages on top of the frames of a hive. Imagine our surprise and astonishment at finding a few days after a full fledged and colored queen as occupant, and stranger still to us was it to see her well received by a queenless colony in another hive, and the way she went to diving into the cells for honey the first thing, caused "P. G." to christen her "Lunatic" and of course *her* queen. She is now a fine, large, yellow one.

Now it has always been to us one of the things inexplicable why a queen was always well received in a hive from simply being *hatched there*, and it seemed almost like superstition that a whole colony of bees know whether a young queen, when seen crawling about on the comb, was hatched in the hive or was placed there. Those who have made futile efforts to introduce virgin queens will readily understand us. And we were still more surprised to find that our friend Shaw introduces virgin queens by caging them from twelve to sixteen hours, not more. The experiment with "Lunatic" seemed to imply that the bees had no grudge against an infant queen, and to our great surprise and relief we have been for the past week putting queens just hatched into any hive with impunity. We simply remove a frame from the queenless hive and place the young queen among the bees, she instantly begins to search in the cells for honey, and so far we have hardly had a bee take any notice of them unless it was to attempt to drag such a puny, weak thing out of the hive when we cage her a few hours or until she is able to walk steady. These queens after a few hours seem perfectly at home and as we have had only one out of nearly a dozen "turn up missing" we shall think it safer and less trouble than to insert cells. A large number of cages can be kept in one hive and thus facilitate examinations; or indeed the whole top of the frames of a strong colony may be covered with cages so arranged that no bees can pass above them, and we can then open the doors to put in cells, examine queens or remove them without smoke, veil or anything of the kind.

The top of a Langstroth hive will contain thirty of our cages, or a frame can be made of strips of wood divided into apartments of the same material and the whole bottom covered with wire cloth, so that we can have sixty-three cages nearly two inches square each. Of course each one must have a separate door and to use all the apartments we would need a very strong stock of bees, a two story hive reduced to one for instance, and the whole should be made very close and warm, with a soft thick quilt on top. Such an apparatus should be examined two or three times each day; for to succeed in introducing the queens they should be removed almost as soon as hatched. Put three or four bees in with each cell taken from the hive on which it was built; these may be secured by holding the cell against a cluster of them. When a cell must be cut open in separating them, omit the bees, but it must then be examined oftener and the young queen will soon die unless they have a drop of honey.

Since writing the above we have actually been using a fifty-four cage nursery above the frames of a hive *without doors at all*, but simply a piece of rather thick stiff woolen cloth is tacked to one edge and spread over the cages, and with a quilt over this the cells are as warm as in the body of the hive. We used a two story "simplicity," reduced to one so that it is crammed with bees, and we can examined the whole in *one minute*, for all that is to be done is to raise the lid and roll up the cloth and quilt. No fears need be entertained that the queens will get together, for they instinctively stick to the wire cloth on the bottom of the cages, seeing the bees below. We need hardly add that not having a bee in your way to bother is a great relief, and we are certain that just as fine queens hatch out without any aid from bees being kept in with the cells, nor is it necessary to make any provision for food in the cages, as the queens should be removed and introduced in a few hours at most.

The time occupied is less than that of inserting a cell, and we find it less risk; where we have waited until the unqueened colony had started cells, we have had no loss, and we have usually succeeded, even when the old queen was killed and the young one put in on the same day, and even with the most vindictive hybrids at that. To make a nursery as we have described, it is only necessary to make saw cuts across an inch board, two inches apart and half way through; now, when strips are ripped off from this board just thick enough to fill the saw cut, it will readily be seen that they can be pushed into each other, so as to form cages two inches square. Cover the under side with wire cloth, lay it on top of your hive, and pack strips of woolen around the sides to make it bee tight, put in your cells, and it seems to us that *any bee keeper* could rear "queens for a dollar." Those who rear the best and finest ones will of course get the most orders. There's room for all who will aid us. We will insert their card free.

Of course we may expect such attacks on "dollar" queens as we have had on "dollar" hives, but "by our works shall we be known." To aid in the matter we will furnish fifty-four cage nurseries for Langstroth hive, ready to put together, for fifty cents; this includes wire cloth, and the whole can be sent by mail for ten cents.

RECAPITULATION.

Queen rearing may be reduced to the following simple operations, with the implements we have mentioned, supposing your hives are all divided and each part has learned to protect itself from robbers, gather pollen, etc., etc. :

Suppose your nursery stocked with cells, we will give the first queen hatched to the first queenless hive, and the next to the next, and so on. On examination next day, if the queen is all right, the hive containing her may be omitted in our daily examinations until she is a week or ten days old. When found laying she may be shipped to fill orders or used as required. All queens missing in our daily examinations should have their hive supplied with a strip of eggs or very small larvae from our choicest queen mother, for if the queen is really in the hive and has only been overlooked, this will do no harm, and if she is lost, cells of value will be started and thus we will keep our nursery supplied. We should never or seldom risk introducing our young queen until we are assured they are queenless by their having started queen cells.

Thus we rear cells, and when these are sealed cut them out and give them a a young queen; after the young queen lays we rear cells again, and so on, presuming the queens will be better received after cell rearing and that better cells will be built after they have had a queen. With the queen index and a fifty-four cage nursery, the work of the apiarist is very simple and well defined; providing he is prompt, neat, careful and diligent.

P. S.—We need hardly state that cells should be reared only in colonies that can *do it well*, and that their own brood should always be replaced by that from a *carefully tested* queen. With our nursery all cells may be saved, no matter how closely they are built, for if we wait until the queens are fully formed they ripen equally well, so far as we know, if kept warm, whether out of the cells or sealed up.

◆

IN consequence of the very sudden and unexpected death of our Artist Photo's have been delayed.

HONEY COLUMN.

I HAVE got off 1600 lbs. box honey, which I have sold for 25 cts. per pound. Extracted sold for 14c. I have also worked another small apiary for half of the honey (box honey), from which I have taken 900 lbs. I have also worked a 150 acre farm with the help of one man, and to tell the truth I am nearly worked out. G. M. DOOLITTLE,
Borodino, N. Y.

I am having considerable of my honey sold in our town at 25c. Commission 10 per cent. R. WILKIN, Cadiz, O.

I shall extract all my honey next season and hereafter, for I have no trouble in selling all I can produce at 20c.
JOHN A. BUCHANAN, Wintersville, O.

We have 1200 lbs. nice basswood honey for which we want 12½c. per pound. and pay for kegs. Kegs hold 150 lbs. Have some in barrels. G. M. DALE,
Border Plains, Iowa.

I began on a small scale, as you tell about, and try to learn as I go along. I began this spring with three swarms; now I have ten, and 43 lbs. of nice box honey, which I have sold at 40c. per lb.; 80 lbs. extracted honey sold at 35c. How is that for a new beginner, and in the center of the city at that?
H. A. HOLCOMB, New Bedford, Mass.

Have taken 800 lbs. honey from eight swarms, and increased three new swarms. I have one barrel containing 500 lbs. which I wish to sell for 15c. per lb., barrel not to be returned. S. ROWELL,
Faribault, Minn.

FRIEND NOVICE:—I have three thousand pounds of nice extracted honey, for which I want 11c. per pound, the barrels thrown in. I have 80 swarms of bees in good condition. They are gathering honey very fast, and I have all that I can do to keep up with them. I have all Italian bees; am the only person in the county that uses the extractor that I am aware of; have been reasonably successful, and don't think of giving it up; but can't get 500 pounds from one stand yet.
GEO. PARRATT, Winimac, Ind.

E. C. Blakeslee of this place has 1000 lbs. extra white clover honey.

G. W. Dean, of River Styx, Medina Co., O., has about 1500 lbs., and we have about 1000 lbs. of our own remaining. In view of the scarcity of honey in this locality, and the extra quality of the Medina Co. clover honey, our prices will be for the present 18c.

In regard to the honey market we give prices as follows:

[For the "Gleanings."]

Aug. 21st, 1873.

We have made arrangements for the sale of large quantities of honey. Extracted honey is made a *specialty*. We do not handle honey on commission, but pay cash on delivery.

The prices for extracted honey depend on the *color* and *quality*, and range thus:

Buckwheat honey from 10c. to 12c. pr. lb.
Mixed " " 10c. to 13c. "
Basswood " " 13c. to 15c. "
White Cl'v'r " " 15c. to 18c. "

"Mixed" honey means two or more kinds together. We do not want honey in *glass* jars; must be *in bulk* of 5, 10, 32 or 40 gallon packages; have no objection to *candied* honey.

Comb honey ranges from 20c. to 30c. per lb.; same price for same quality of honey in large frames as in small boxes.

NATIONAL BEE HIVE CO.,
St. Charles, Kane Co., Ill.

FRIEND NOVICE:—Your request for quotations rec'd, which please find enclosed. These quotations are based on the *merits* of the several kinds of honey. You will observe that we quote basswood honey lower than white clover. This is proper, as we find *in practice* that white clover not only sells better, but is preferred as an article of food. We can sell 10 lbs. white clover to one of the other.

Sooner or later beekeepers will find it to their interest to keep the several kinds of honey as distinct from each other as possible—otherwise they will have to sell it as "mixed" honey. Yours truly,

M. M. BALDWIN, Sec'y.

We regard the above rates as very fair; but now comes another consideration, and we hope no one will feel hurt unless they are guilty, if we do speak plainly.

It is this: we bee keepers *want to be sure of our money* when we send it away. Two years ago we sold our honey to C. O. Perrine, of Chicago, who agreed to pay for it as soon as received in Philadelphia. Messrs. Shane, Shaw, White, Dean and some others sent their honey also. We got our pay by making deductions for inferior quality and leakage after about three months; Mr. Shane also got his, but the last three have as yet only got renewed promises, and we are well aware that the loss of the amount (about $300 or over) has been keenly felt by all. We don't know how much he yet owes, but many similar complaints have been sent us.

Again, Baumeister & Co,, of Chicago, this season, after receiving a sample of honey from Mr. Shane, wrote him they would pay him 16c. for a barrel, and that he should send it by express C. O. D. On its arrival they refused to pay the charges, amounting in all to about $15, and Mr. Shane had no choice but to pay the amount himself, leaving about 13c. per pound for his honey net, or to get it back as best he could.

It seems to us that ordering 500 lbs. of of honey by express C. O. D. is rather a queer proceeding. We leave our readers to draw their own inferences.

In regard to the standing of the National Bee Hive Co., whose card we have given, we can only state that we don't find them quoted at all, and we have had no time to make proper inquiries before going to press. As they sent us no reference we hope they will excuse these remarks, for we would caution our readers to in all cases find out the precise responsibility of the parties to whom they are sending their honey. No honest man will object to such a proceeding. A large amount of honey is now being retailed in towns near where produced, put up in glass fruit jars. These jars are always wanted in every family, and quart jars, honey and all, are sold here for 75c. each.

Grocers are usually willing to sell them for a commission of ten per cent., and as the whole transaction is near home, there is no risk and no loss. Each jar should have a neat label, with the name of the honey and also of the producer. These can be procured of T. J. Walton, Salem, O., printed in two colors, cut and gummed, as follows: 1000, $3; 500, $2; 250, $1.50. No less quantity than 250 printed. Samples sent on application.

In conclusion: It costs too much to produce a ton of honey to allow irresponsible parties to cheat us out of it. We have tried having honey sold on commission in New York, but it resulted in getting about half what it was worth after great delay. If your crop is not too great, we advise having it sold by grocers in your own neighborhood.

HEADS OF GRAIN FROM DIFFERENT FIELDS.

No. 90.—I have built a cellar, walled and arched with rocks. Is it advisable for me to put my bees in there this winter or leave them on their summer stands? Inclosed you will find one dollar for which you will send me a queen. If you can send her by mail all right. But if that is played, you need not send her as there isn't any express office near me. My faith is very weak on Italian bees. I have several hives and they are not as good as my blacks. I will try a little longer and if I don't soon get better ones, I will stop trying Italians. M. H. MILSTER, Frohna, Mo.

Such a cellar if not damp we think would answer excellently. As to whether bees are better in doors or out as far south as Missouri we are unprepared to answer, but would suggest that our friend try half of his hives each way and report to us. As we learn that queens are still sent by mail by queen rearers generally, we shall continue sending them thus, until notified to the contrary. The difference in cost of a *two cent* stamp and ordinary express rates is quite an item, besides remoteness of express offices compared with post offices. Bear in mind, however, that any writing in the package whatever, besides the address, subjects the writer to a penalty, and the cages must be so put up that the P. M. can, without trouble, ascertain the entire contents. This and the two following letters sound strange to those well acquainted with the Italians, but they only show how little we can judge of many matters pertaining to bee culture from a single or few experiments.

"NOVICE'S" Gleanings in Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., OCT. 1, 1873. No. 10.

STARTING AN APIARY.

No. 10.

"KEEPING AN APIARY" instead of the above heading would probably be more appropriate for the next six months; yet we do feel confident, kind reader, that, with proper precautions, all stocks in good condition now, may be preserved without deterioration until April, 1874.

In giving directions for wintering we are obliged to bear in mind that our readers are, many of them, placed under circumstances widely differing, and that to have our remarks equally applicable, these varying circumstances must be considered.

To illustrate: How many of our readers have only one colony to pilot safely through the winter? But few, we trust, yet we will briefly consider the duties of such. If no dysentery or bee disease has been known in your vicinity, and you prefer to run some risk of losing them rather than to remove their natural stores, or if they are only in box hives, perhaps you may leave them on their summer stands. We would not undertake to protect them from the cold in any way that would deprive them of the sunshine, for that is one of the great essentials for out-door wintering. Protect them on the north, east and west, by fences, walls or buildings, from cold winds all you can, but don't intercept the sunshine; if they have no such protection, give it them now, and let it remain the year round. Such a a fence can quickly be made of cheap lumber, and it will be an excellent idea to have it extend on the south side also; but far enough away to cast no shadow on the hives. If you contemplate building up an apiary, make it hexagonal all around your apiary, and it may run as close as within three feet of the row of hives furthest north, a little more than that on the other sides, and perhaps ten feet from the southern row. This fence should be at least eight feet high, and if you secure it from being blown down, more would be still better. If you have plenty of ground, a hedge of evergreens will cost no more than a board fence, and will continually grow better. Consult your nearest nurseryman for particulars; you are sure to be humbugged if you even consent to *talk* with "tree peddlers."

These wind breaks are wanted even if your bees *are* wintered in-doors, and should not be neglected. In regard to ventilation, for out-door wintering nothing need be changed from their usual summer condition, unless it be to nearly close their entrance; but as this is liable to become stopped with ice or sleet, some upward ventilation should be given in such a way that it cannot become closed with snow or ice. A quilt made on purpose or any woolen blanket or clothing spread over the frames seems to answer best, for it prevents a strong current of air through the hive and yet allows them all they need; of course this covering must be well protected from the rain. Should the sun come out at any time very warm and bright after snow has just fallen, it may be well to shade the entrance with a broad board, as has been ofttimes recommended.

Now when we consider that out-door wintering is almost always unsafe, can we not, with less trouble, put even *one* colony in the cellar? Where a dark, dry, warm cellar is at hand we should have no doubt in the matter.

Much has been said about double walls for hives, and hives packed on all sides, but aside from our own observation (we have just gone over the whole file of *American Bee Journals* for the past seven years, as in fact we have all the other bee journals published as well, but their evidence is so meager compared with that of the *A. B. J.*, we hardly consider them worthy of mention in order to *glean* facts on this subject particularly,) the evidence seems to be that hives of thin lumber placed in the sun do as well or better than the double or packed walls.

We should bear in mind that strong colonies winter well (or have in former years) under almost all circumstances and many times when some new arrangement has been tried, the credit has been given *that,* whereas it simply did not hinder them from wintering well. Many cases are mentioned of bees wintering finely in hives without bottom boards or with great cracks in, and, in some cases, almost without hives; yet no one advocates such a plan. To sum up, we should say the arrangement for out-door wintering that gave them most sunshine, with the fullest protection from the wind and rain, would succeed best.

A single colony cannot generate the amount of heat that forty or fifty would, and we think it very doubtful about their being benefited, even had they a covering one foot in thickness on all sides. Would not a single pail of water freeze under such circumstances? Yet if it were buried in the ground, below where frost would reach, it assuredly would not, and so we would put our one colony in a frost-proof cellar, or leave them full in the sun. It is well known that they will bear a very low temperature for a short time—a few days or a week—if they can only be warmed up occasionally, to enable them to fix up for another cold snap. If you live in a region where the cold may continue ten days or more below a zero temperature, we advise a cellar or frost-proof bee house, by all means.

To those who have five colonies or about that number, we should advise as above, only that it would probably pay to have a small part of your cellar enclosed, so as to be perfectly dark. Objections have been made to fastening the bees in with wire cloth, yet, when housed, many succeed in so doing without irritating the bees at all, and it has the advantage of preserving the floor free from dead bees at all times; also, if the temperature should rise to 50° or more, many get out and fail to find their way back; besides, in carrying the bees into their winter quarters and back again, a bump carelessly given would not result in the loss of bees. More experiments are needed on this point, and we hope to be able to give the result of some in our next.

We have just seen an apiary of forty stocks or more that were so confined, and kept in a cellar that was but slightly darkened; yet no bees objected to the confinement, and very few were found dead on the bottom boards; no colonies were lost at all. They were fed on sugar syrup, *of course.*

As soon as you have a dozen colonies, we would advise a bee house such as we have described. A good cellar may answer, it is true, but a house made especially is much more convenient. We really hope our friends will have all feeding finished up soon after they receive this, for we wish to advise in regard to placing the different kinds of hives in-doors in our next.

◆

Sept. 27th. Bees are working quietly on a half barrel of sugar. Cider-mill deserted.

QUEEN REARING.

SHORTLY after our last number went to press a number of cool nights nights rendered our fifty-four cage queen nursery inefficient to keep up a brooding temperature, and many queen cells were lost, but its great convenience during warm weather made us loth to give it up. While studying on the matter we observed that the copper reservoir of water on our Stewart stove, kept warm even after an interval of many hours, without fire, and that a body of water changes temperature quite slowly. To be brief, in less than half a day, Novice, with some assistance from his friends the tin-smiths, made a simplicity hive, all of tin, with double walls and having a fixed bottom double also; the space between the two containing about eight gallons of water. The stove used last spring was again set up in the bee house, the top removed and our hatching nursery placed on it, making the joint close with strips of woolen cloth between the tin and iron. A shallow tin lamp made to hold about a gallon, and supplied with a common burner and chimney, was placed on the bottom of the stove, and so arranged that it could be replenished with oil by simply opening the stove door.

After about twelve hours, our thermometer inside showing a temperature of about 100, the lamp was turned down considerably, for hives rearing queen cells showed on an average only from 86° to 90°. Well, with some solicitude we removed several frames, containing cells to our miniature conservatory, and were rewarded by seeing very soon large yellow queens uncap their cells and walk forth with all the strength and vigor of those reared in June and July.

As we dislike to cut combs and brood, as we must do to give each cell a separate cage, we propose leaving them all as built in the hive and trust to our skill to "keep peace in the family" by visits four or five times a day. Now please try and imagine our exultation, kind reader, when we discovered that the queens could be plainly heard gnawing out of their cells, and that by holding the comb to the ear the precise cell could be selected and the queen liberated, and safely caged until we are ready to introduce them. The apparatus works most beautifully, for the temperature can be kept to a degree, if necessary, by turning the screw to the lamp, and after the cells are sealed we think them safer thus than in their own hive even. From one strip of comb containing thirteen cells we hatched out twelve fine queens, and at one time we hatched eight in one day. In fact we have supplied each one of our queen rearing colonies with fine yellow queens in so short a time since starting the apparatus that we begin to wonder what we shall do with our rapidly increasing family of infantile aspirants to royalty.

Since the cool weather they are very tardy indeed in beginning to lay, but should they not become fertilized this fall, we can, at least, give the matter of hatching queens by artificial heat a good test and be ready to commence early next season.

The combs are covered with a quilt, of course, to prevent too much escape of the heat, and it is essential that a stove be used with a pipe to cary off the products of combustion, for even a lamp burning continually would render the air impure. The expense of oil is from one to two cents per day and our bee house is kept comfortably warm by it even during frosty nights. We have no doubt but that the apparatus could be used for hatching eggs and may be brooding the chicks afterward, also for a miniature conservatory for plants, if a glass case be put over it; but we leave the subject for others as our province is only bee culture. In case of a weak colony suffering from dysentery, they could be quickly warmed up and fed wholesome food and then, combs, bees and all returned to their own hives. The expense of the whole need not exceed four dollars, for any tall stove will answer; but we presume the expense of oil necessary to give the required temperature, would depend very much on the room in which the whole is located; our bee house retaining heat a long time when once warmed up. We have no trouble at all, as yet, in introducing queens just hatched, and as a proof that the bees do not recognize such as queens, we will mention that on giving brood to a colony when the queen (given them the day before) was called missing, they started cells and produced two large fine ones. On cutting these out on the tenth day to give them another queen just hatched, a live queen, appearing at least a week old, was found endeavoring to destroy them, but was prevented by the bees. We explain this by supposing they had not noticed her being in the hive until the cells were sealed and then they prevented her destroying them. These two cells produced two fine queens which were found crawling about in our conservatory next morning.

Should any one ridicule rearing queens by artificial heat, bid them ask experienced Florist or Market Gardeners if plants thus reared are not equal to those produced in the open air.

We should add that Mr. F. R. Shaw first gave us the idea of using a lamp but he used warm air instead of water.

Mr. E. C. Blakeslee and Willis A. Phelps, of this place, add their names to the list given last month of those offering queens for $1. With the aid of the improvement mentioned in this No., we hope to be able to furnish them at the same rates during the whole of next season.

OUR FALL DILEMMA.

Since 'tis the fashion, we too have been moving our bees "where the flowers bloom," and Novice was dispatched yesterday with forty colonies and takes sixteen more to-day (Sept. 20) to a swamp twelve miles distant, where hundreds of acres of yellow "posies" are "wasting their sweets on the desert" or *rather swampy* "air."

Thirty-one colonies of two story Langstroth hives, with nuclei in the upper stories, were carried safely on a hay-rack placed on a common lumber wagon. Strips were sawed just right to slip between the frames at each end and wire cloth was then nailed over the portico. As the covers to the upper stories would not fit over the lower ones, we were obliged to cary the whole bulky apparatus even if the upper story was empty. Never before did the Simplicity hives show their advantage more plainly; for they only required wire cloth over the bottom and they were ready, no matter how strong the colony, and as they could be packed close up, almost as many stocks could be carried in a light spring wagon as on the aforesaid hay rack. The advantage of handling a light, plain, smooth box compared with the others (and yet their inside capacity is precisely the same) has decided us to offer our whole lot of two story Langstroth hives, minus frames, for fifty cents each, if they don't sell for that, we propose breaking them up in the spring.

The first thing to-day will be to hang a colony on the spring scales, and we will report progress before going to press. There has been a reason besides the aforesaid flowers, for this sudden migration, and that is a neighboring cider mill. We were invited to call and see the "cider works" a few days ago and beheld perhaps more Italians in a body than we ever did before. They covered the pomace, had ranged themselves along the channels where the cider coursed, or generally coursed, and seemed all ready for the moment when the screws were turned; and indeed so well had they followed the business that almost every drop was sucked up as fast as expressed, and "nary" left for the "cider man." We told our neighbor, who seemed very fair and friendly when he found that we were so disposed, that we would take the bees out of his way at once; and as some of our subscribers tell us that the "swamp" never fails to furnish fall honey, cannot we "kill two birds, etc.," by moving our bees every fall. Had our neighbor not hesitated to tell us the true state of affairs sooner, we should have had them removed a month ago. Of course every drop of cider and swamp honey will be removed by the middle of October, and we shall have to trust to "tea-kettles" and "Novices skill," to put our colonies all in winter trim so much later than we have recommended.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, Oct. 1, 1873.

On page 55 July No. it seems a line was omitted in Mr. Pratt's article. After the words "old hive," read "and allow them to enter the new one," which, etc.

◆

"My little girl sends love and a kiss to the 'blue-eyed baby,'" writes a subscriber; and we return the compliment hoping the "baby" may live to know all her friends, through "Gleanings," at least, if not in person.

◆

"Mrs. N." and "P. G." earnestly request our friends *not* to use magnifying glasses in viewing the photo, for the artist assured them that no one could see their eyes even if the blazing western sun did almost put them out. It was necessary to have all objects illuminated by the sun direct, for a well defined picture.

◆

We have quite a number of complaints that a *few* who advertise queens largely have received money for them and will not even answer letters of inquiry in regard to it. We have written to these persons direct, and if they give us no explanation we shall give them the benefit of a *free advertisement* of their mode of doing business. We propose *sifting out* the unreliable names.

◆

Perhaps we should remark, in regard to our discovery in introducing queens just hatched, that Mr. Langstroth almost suggested the same thing at the Cincinnati convention, and that C. C. Miller, of Marengo, Ill., also said, in the *American Bee Journal*, some time ago, that it could be done with a colony constructing queen cells; however, strange as it may seem, we have found, as yet, no colony hostile to a queen just hatched, although *a few* have been missing the next day.

Last month we made the offer of wire cloth for extractors by mail for 25c., but further experiment showed that the light, close mesh was unsuitable for very thick honey, and none could be found in the market just as it should be. As the coarse wire is heavier and costs more because made especially to order, we shall have to charge 15c. per square foot for it. The untinned, such as we have been using, we can furnish for 8c. per square foot. If sent by mail, postage will be 6c. additional. We can furnish also very nice tinned wire cloth for queen cages, sixteen meshes to the inch, for 15c. per square foot; postage, 4c. per square foot.

◆

We hope our friends will accept our thanks for circulars sent us pertaining to bee culture. While most of them seem to have been sent out with a wish of doing a fair and honest business, we find it is hard to get over the old idea of "selling rights."

Busy Bee is sent for a three cent stamp, and, even if it does run a patent hive, contains considerable that is valuable and but few errors. We clip the following:

ARTIFICIAL HONEY OR BEE FOOD.

"During the winter of 1871–72 our bees were lacking supplies, and being anxious to obtain a cheap and reliable food I communicated my knowledge and observations on artificial bee food to an eminent chemist of New York, and employed his services to aid in compounding a food answering the same purpose as honey. After conducting a number of expensive experiments we succeeded in discovering a correct method for compounding an artificial honey equal in every respects to the natural article, and at one-third to one-half the cost of honey. To obtain this recipe has cost me nearly $500.00, besides my time and experiments; but it is the sublime mode of making honey in every respect as good as that made by the bees, and if the simple directions are followed in mixing it will appear like amber, clear and fresh, free from wax and unfomenting. It will also keep in any climate. If bees are fed upon this Ambrosial Honey they can be wintered without any of the risks or other disadvantages consequent upon depending on the natural method alone for the needful supply. The Ambrosial Honey can be made by any one with ordinary kitchen utensils, and with very little labor."

"To enable bee keepers to satisfactorily compound this cheap and beautiful article of food we have the recipe printed with full directions to manufacture and use, so each one with very little outlay can have the benefit of our labor and expensive experiments. The recipe to manufacture for individual use or apiary will be sent securely sealed by mail, post paid for $2.00."

"The recipe is coprighted and secured according to law. Parties receiving it are therefore cautioned not to sell the same or in any way make it known to others. It is warranted as represented or the money will be refunded."

Now if *we* haven't a fondness for good things, we don't know who has, and this "ambrosial"—Well, we have sent a two dollar greenback, and really we can hardly wait until the mails shall bring us the "wonderful" paper, If it wasn't for the *law* and *copyright* we would *give* the whole to our readers in place of a $2 00 chromo, etc. On second thought we *will* give the whole thing in our next number to all our subscribers and take the consequences; and, furthermore, send us all the valuable receipts you can and we'll send the money to *Mr. H. Herman Flick, Lavansville, Pa.*, or to anyone else; for "Gleanings" must contain all that is of value about bees or honey, no matter what it costs, nor how many *suits at law.*

HEADS OF GRAIN FROM DIFFERENT FIELDS.

91.—I never had but one Italian queen (or purported to be), and kept her three years. She was uncommonly prolific, but I never realized but one three pound box from the colony. They raised a queen last fall to supply her place, and although there are quantities of bees there is no honey but a little extracted, while I have three black colonies that will average over a hundred apiece (only six colonies in all, one new one) mostly box honey. They are all running over with bees, some two stories, with boxes piled round sides and top. I never have any trouble in getting it put in boxes if any is to be gathered. Side boxes are a humbug. No honey, in my experience, will ever be stored in them, unless a comb of brood is next the boxes, and then you will have brood in the boxes, especially if there is drone comb in them. It is almost absolutely necessary to stick pieces of comb in boxes in any position. The most of it is stored in small boxes, about three pounds box and all, and brings gross weight, white clover, golden rod, &c., in new comb, right through, 35c. wholesale. Even in a long hive, with empty frames on sides or ends, with a powerful colony they will store it on top in preference. One hive with fifteen frames of brood and six empty ones on each end put over fifty pounds on top of the brood frames, and the ends are not more than half full, I have no doubt but what I could get larger quantities by extracting, but only take what is absolutely necessary, as last year I sold the most I extracted for 10c. The quality this year is the finest I ever knew, and I retail it at 25c, 200 lbs. would glut the market at any price, while comb honey can be sold by the ton. E. C. Newell, Brooksfield, N. H.

We believe we never saw a strong colony of Italians that did not store honey when others did, but we have reserved some very prolific nearly black queens until this season that did just that, *i. e.*, clustered all over the hive in idleness while the Italians filled their combs, or at least slowly added to their stores. These black stocks required feeding to prevent starvation. and so we pinched the heads of two very prolific queens. There is so much diversity of opinion in regard to "side storing" that we opine that the progeny of some queens incline to work out sideways more than others. (See "Can Our Bees be Improved?" in May No.)

We think our friend, with many others, will find that a fine qualtity of extracted honey begins to sell almost as readily as comb honey, and prices begin to come up very close.

92.—I lost last winter 24 out of 36 stands of bees on account of extremely cold weather: temperature was for two weeks from 30 to 40 degrees below zero. I winter on summer stand. Have increased my stock from 8 to 15 by natural swarming. Have tried your plan of double story for extractor on one hive; gave empty comb from hives I lost; extracted 28th of June 30 lbs. nice honey from upper story with Gray and Winder's extractor. I have not disturbed the lower part of the hive. From my other seven hives I have taken four boxes of box honey, about 45 lbs. in all, three hives not yielding anything. If pasture should be better in September, I may receive four boxes yet, which are partly filled now (about 40 lbs.) Next year, if we are spared, I shall try the extractor, provided pasturage is favorable. My bees are all natives. Have tried to Italianize them, but lost them in winter. C. A. Higold, Arcadia, Ill.

If our friend would get the full benefit of the extractor, he should "go below," too, and when he gets the Italians, *he*, and *not the bees*, should manage the swarming.

No. 93.—My bees have done very well. I have taken about 900 lbs. from my 25 stands. During the last of June my scale hive showed a gain of from 4 to 6 pounds daily; this month has so far been rainy, cloudy and cool, the gain has only been about 1 lb. daily. Mrs. Tuppers notion that it injures the brood to extract the honey from the brood combs is an unmitigated humbug. I have extracted the honey from brood combs every season for five years and never injured any brood unless I turned too fast and threw it out. This year I am extracting the honey from all frames more closely than ever as I find it for the mutual advantage of both bees and my pocket. W. J. Ronald, Fairview, Iowa.

No. 94.—I have made another hive, the mate to yours only *not so rough*. I'll say no more now. Stephen Young, Mechanicsville, Iowa.

Thank you, Mr. Y., we hope you and all others will say just what they think of our wares. We have no doubt many of our readers can do better work than we did, but we gave you the idea which was our greatest object. "P. G." scolded so much about the "knotty hives" that we finally did purchase better lumber.

No. 95.—Dear Novice:—I told you sometime ago that I could not use a thin knife, but I have found since that I did not know how to use it, as I can now uncap very nicely and without hot water.

Chas. E. Widener, Cumbeland, Maryland.

We are quite glad to hear that others, as well as "P. G.," are learning what skill can be acquired with a thin knife. If made very thin and used on nothing but wax they can be kept very sharp, as they should be. It seems to us that hot water or any machinery would be much more trouble and after all not as rapid.

NO. 96.—My bees are gathering honey by the barrel. Yours, truly,
N. E. PRENTICE, Castalia, O.
JULY 1st, 1873.

Right glad to hear it, hope they'll keep doing so.

No. 97.—Your extractor I believe to be a good thing, but having never seen one of any kind, I know nothing of the principles upon which they work. I must confess that I am more dumbfounded with its description than I am with the hive. Couldn't you get up a sample of it also, that you could send by mail and charge enough to pay you? Very respectfully, WM. C. GRIER.

98. Can your gearing be attached to the Peabody extractor without much cost? I have one of them. In feeding bees in your "simplicity" hive, will it do to pour sugar syrup on top of the frames? If not, what is the best mode? CHAS. D. ELLIS,
Edentown, N. C.

We regret to say that we know of no way in which the Peabody extractor can be made better. If gearing could be attached, the momentum of so much metal besides the honey would make matters but little better.

We have now on hand a half dozen Peabody machines that have never been used which we will sell for $8 each; regular price, $15. They will do excellent work, and *very likely* will never wear out, but the one who uses them we fear *would*.

99.—Most porticular P. S.—Fearing that my long sheet's contents would get somewhat crossways in your pile of unreadable letters, I have concluded to give you the gist —"nothing but tho gist." 1. How to make bees build worker comb only, and when to feed bees syrup—here—for winter. 2. Price of empty worker comb. 3. Could your scales be gotten up cheaper than $5, and is more than one pair needed in an apiary? How do you rig a hive to at any time weigh with the scales?
T. J. KENNEDY, Castalian Springs, Tenn.

Bless your heart, friend K., we have never yet had a letter on the subject of bee culture that was unread, though some of them required even P. G.'s utmost efforts (she has been a "school marm" fourteen terms), and we think they have all repaid the time spent.

1st. We don't know. This past season we were so well pleased to see them build comb at all, that we were not over-particular. We keep drone comb out of the way of the queen, and find it just as good for the extractor. A colony with a young queen is not as apt to build drone comb, and by reducing the worker force we think it can almost always be managed. Few things are *positively certain* with bees.

2d. Novice suggests that our best worker combs are worth a dollar apiece to us, but P. G. says we don't want to sell 'em at any price. Won't some of our subscribers offer them cheaper, *i. e.*, in metal cornered Langstroth frames?

3d. We should consider but one pair of scales necessary in an apiary, and we keep a one-story hive permanently hung on them. It is held by a wire running under it, and is kept from swinging by the wind too much, by two more wires attached to front and back carried horizontally to stake; leaving it to rise and fall by each ounce of increase or diminution.

Again, $5 is too much for an implement like that for bee culture. But that isn't the worst of it. Our stock is sold out, and dealers and manufacturers now say they cannot furnish any more at less than $65 per dozen; that ours was stock remaining on hand, etc. Novice threatens to study up something for about a dollar that will tell when a hive is gaining or losing at a glance, but even then it's very convenient to have scales that will weigh accurately when we are feeding for winter, etc., and as they must be weatherproof, perhaps they can't be made any cheaper. It is just fun for *us* to know every ounce of success or the contrary. To illustrate: our bees have been going northward of late as soon as daylight and almost sooner, and on returning they were covered with yellow dust. By the time the scales had shown a few ounces increase, Novice investigated, and found a ten acre cornfield that it seems had been planted with pumpkins, and corn put in occasionally. The time was sunrise, or shortly after, and he claims the hum of industry that arose from a sea of yellow blossoms (rivaling anything in Vick's collection in size if not in splendor) was enough to—to—well enough to make any spring balance feel the effects of it. In a few days the grasshoppers, too, discovered the nectar, and they seem now to be disputing with the Italians as to who shall get up earliest.

No. 100.—I have kept bees in Iowa for five years, and I think it is one of the best States in the Union for bees. But our best honey harvest is from the middle of July till last of September. I kept black bees for 2 years and did not get a pound of surplus, and the summer I gave them Italian queens I got over 300 pounds from 5 stocks. I use the Langstroth hive exclusively.
ALFRED MCMAINS, Chariton, Iowa.

No. 101.—My extractor (just finished) works "like a charm;" the only trouble is the strips of tin came very near cutting the first pair of combs into four inch strips; however, I soon learned to turn slower and did not cut them so badly, but think the wire cloth will be much better. My extractor is a home made one, but I think it is on the right principle: stationary can, revolving frame. Any man that gets me to raise box honey for him after this, will have to pay me at least three times the price of extracted honey for it. JOHN ATKINSON, Nelson, Pa.

Nothing gives us more pleasure than to hear from those who are succeeding with home made implements. There is a species of independence in being able, when needful, to make materials at hand answer our purposes that we always admire.

No. 102.—I will enclose you a letter from the young man who took my bees to Iowa. If my bees do any thing like what they report there, I will be happily disappointed. I had counted on exagerations; having extracted nearly all the honey and reduced the hives in bees as much as if they had swarmed, it was as much as I expected that they would build up to proper condition for winter, as I know they would have accumulated nothing here. R. WILKIN, Cadiz, O.

We rejoice at the prospect of Mr. W's. success in his project, and enclose extracts from the letter referred to:

Hurrah for Basswood Ten and fifteen pounds stored in 2½ days. Gallup says the first crop at least is mainly a failure. Mr. Lindley here says if I had got here one week sooner they would have stored several times as much. Hundreds of Linn trees perfectly covered with bloom. The honey nice and thick. If they store at this rate I will soon have to extract. Went to see Gallup. He's a very pleasant, senscible man, with lively flow of good humor. Not a single colony died on the way here. Generally in good condition I think. Just 165 hives, (yours) counted twice. Had an awful hard fight to keep the bees from smothering on the way. Used good many barrels of water on them. You know how they squeal when smothering. Water only saved them. W. Harrison,

"Beekeepers' Paradise" (Osage, Iowa.)

No. 103.—The days have been sunny with cold, frosty winds, so that every bee that was enticed by the sun to leave the hive, was cut down by the frost. What would you do in such circumstances? To return the bees to their winter quarters would be considerable work. The "Gleanings" informs us that the entrance to all your hives are toward the east or west. I am very curious to know why. Is it to keep the bees within doors on unfavorable days? Another question which I wished to put, not to a *Novice*, but to one of Novice's experience in bee keeping: During the winter months, are the frames of hives to be left as close to one another as in summer? I am under the impression—though I never acted upon it—that if the bees had more space in the center of the hive to form a cluster, they would winter better. Combs partly full of honey and bee-bread passing through the cluster must, I should think, operate against them. What say you on this? If I could get *all my hives* from winter quarters, and through the spring season, in as good condition as I find *some of them*, I could astonish the world. And I cannot see why one colony does not succeed as well as the other, when, as far as I can see, all things are alike. I know some bees consume more food in winter than others do. This perhaps may affect them, as too much food affects the glutton. One winter I had a good colony that wintered well and required no feeding in spring with 15 lbs. of food; another of equal strengh, and next to it in winter quarters, almost perished for want of food before I got them to their summer stand, though they had double the quantity of food the others had when put into the cellar. So I feel that I have much to learn yet about bees.

J. Anderson, Ontario, Canada, Apr. 10.

We have experienced the same trouble our friend mentions, and know of no remedy except to build a high, tight fence on the north and west sides of the apiary, and in fact on all sides if it be so arranged as not to obstruct the sun. Such a fence makes a different climate, almost, and bees regain their hives where the wind would otherwise destroy them. A belt of evergreens when grown would be excellent. Our trellises run east and west, that the vines may shade the hives in summer, and our hives obstruct the paths less and leave the best place for working on the north side when placed east and west, for no other reason. As we like the sun to strike them in the morning we have them all east. Will some one who knows answer in regard to more room between the combs for winter. We, too, "could astonish the world" if we could make *all* colonies equal our best: and we are laboring with "Gleanings" for just that result, or that some of our subscribers who have got the energy may do so, when we unitedly work and study out the way.

101.—I have succeeded in getting ten good queens from the hatching of eggs I got from you July 2d. I am much pleased with them. I term them my five-cent queens. Who can beat that for cheap queens? S. H. Miller.

Ashland, O.

We are very glad, indeed, to hear of the above success with the eggs, simply because it shows that 'twas not all an error. However, so many failures were reported that we think queens for a dollar much the surest plan for Italianizing.

No. 105.—I have received over 100 lbs. comb honey from one colony. Honey was made in frames; Langstroth hive. Wintered in cellar—taken out in March, and fed sugar syrup all they would take, perhaps two pounds per week, until May 7th, when they sent out a large swarm, notwithstanding no blossoms were out at the time. Swarm was returned. Bees were hybrid. One comb weighed 21 lbs. Colony was built up in the fall with sugar syrup and was wintered entirely on sugar syrup. Chas. Root, Sheffield, O:

The above somewhat shakes us in our belief that plenty of food sealed up in the combs gives us all the advantage of feeding liquid food daily or two or three times a week. In this case, also, the large yield of comb honey was at a time when other colonies in same locality gave no surplus at all, for they were at that time getting built up into condition to store surplus. With fifty colonies or more feeding twice a week even, is a task, and is seldom attended to promptly. Novice suggests that with "car apiary" (see problem 17) an arrangement could be made to feed the whole at "one dose."

ITEMS.

THIS number closes the volume for those who only subscribed to "Gleanings" as a quarterly, and we have mailed all such, *six* numbers instead of the four promised, and presume all are satisfied that they have received their 25 cents' worth, unless, forsooth, there be those who would have been better pleased with a lesser number than a greater; for we do know, kind reader, that, in this age of periodicals, such things are sometimes a nuisance.

Now, in view of this, (for we should be very sorry indeed to send any one "Gleanings" who did not value it,) we propose, for the year 1871, to have no non-paying subscribers, and to send it to none, not even the *President* or *Queen Victoria*, should they happen to be bee-keepers unless they manifested their wish to receive it by the usual remittance of 75 cts.

Of course we will with pleasure send sample numbers when requested, but inasmuch as we like full liberty to purchase what we choose without urging, we wish our friends to fully enjoy the same freedom. If we succeed in making our little sheet of such importance that our friends find it a good investment, we will welcome subscribers and do our best to serve them; but we wish it to make its way entirely by its own merits. We expect to be able to furnish back numbers to all who may need them, at all times. Shall be pleased to exchange with all other bee journals, and will cheerfully pay the difference in price.

We see by the *Bee Keepers' Directory* just out (first number) that its editor, N. C. Mitchell, proposes to "sail along the shore in shallow water." He also advertises "dollar bee hives;" but *he* don't sell them for a dollar—he only sells us a right for ten dollars, and then we can make them *with frames* and *all painted* for a dollar or less. His mode of "making comb" is now sold away down to *five* dollars, and we are going to send him the five dollars to get it for "Gleanings," *i. e.*, when we get the "ambrosial honey," *if it is good.* Mr. M. also "teaches school" a good deal cheaper. His hits in the *Directory* on ventilation are certainly not very far wrong, and if he didn't always keep wanting to sell receipts and "rights" for ten dollars or more, we should really like some parts of his quarterly. Cincinnati: 25c. per year.

We are happy to add that we have found the screw mentioned in our last, for the queen-rearing cards are entirely unnecessary. Common brass pins driven through the card into the hive half their length and then bent at right angles answer every purpose, as the head of the pin plainly designates the date or condition of things. The pins cost almost nothing, and do not rust by exposure; and so the expense of the device is only one cent per hive; the convenience of it can only be appreciated by use.

PROBLEMS.

NO. 17.—Granted that fifty colonies are as many as are profitable in one locality generally, and that more honey could be secured by giving them a locality in autumn different from their summer one. Could not a wagon or car be constructed, perhaps something on the plan of a photographer's car, that would give the whole fifty the requisite room and space between each hive, and have a permanent place thereon, a light room to be arranged for extracting in the center, and the hives arranged around the outside? The winter repository to be arranged so that the whole can be run in and housed in a minute or more, and as quickly brought out to have a fly during a warm day in winter. A simple mechanism could be arranged to close all entrances with wire cloth at once, and also to open them as quickly.

When pasturage is scarce, single hives hung on spring balances could be located at desirable points for ten or fifteen miles around, and when one of these showed that honey was coming rapidly, our traveling apiary could, in a few hours, take advantage of the yield. Many other advantages present themselves, such as quickly housing our bees during severe frosts in March or even April, likewise some disadvantages. As several have this season reaped rich rewards for moving bees where they could have fall pasturage, we think the matter an important one. Nunn Bros. report 1500 lbs. in about one week by moving their bees only a few counties west. Further reports next month.

HONEY COLUMN.

WE have sold all our honey but one barrel for 18c., and the demand seems to exceed the supply for fine clover honey. There seem to be many buyers at good prices, and many of our friends have sold their crop already at 25c.

Give us the items, if you have any to sell and don't get fair prices at home.

We take great pleasure in inserting the following extract from a letter just rec'd. The more so as Mr. Chas. F. Muth's name is quoted very fair and our readers can rest assured that he is both reliable and responsible: "I will pay for all the choice white clover honey I can get, 16 cents per lb. at Cincinnati depot. I can use a few bbls. of dark or Linden honey, and I may get a good demand for the latter before long, but do'nt think I could pay more than 13 cents for it.

CHAS. F. MUTH,
976 and 978 Central Avenue, Cin., O"

◆

Doleful again. A series of severe frosts, cut short at one "fell sweep" both the "swamp posies" and Novice's hopes, and to prevent demoralization our bees have been returned to their homes In regard to the cider mill, Novice, when baffled at Problem 17, turned desparately to the solution of Problem 15, and he and the bees, are now rejoicing at what seems to bid fair to be a great success, viz: Employing robbers and all hands at work on dry sugar in the open air, exposed to the sun but protected from rain. Further particulars next month.

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

THE PRICE FOR ITALIAN QUEENS after the 1st of August, will be for
Tested Queens, $3.00
Warranted Queens, 2.00
J. SHAW & SON, Chatham Center,
I. E. DANIELS, Lodi,
Medina Co., O.

"NOVICE'S" Gleanings IN Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., NOV. 1, 1873. No. 11.

STARTING AN APIARY.

No. 11.

WE have just returned from a visit to a friend who wished us to put his bees in winter trim; and to illustrate how little care is really necessary for moderate success we will mention that we sold him two colonies of Italians in Langstroth hives about April 1st, 1872. At the same time he purchased a third in a hive labelled "Prof. Flanders" and something else, we can't remember what, but the frames were triangular. We located them at the time as we thought most favorably, and saw them no more until sometime in June, when we occupied about an hour in swarming the three artificially. We did this with two of them, by simply giving a new hive placed on a new stand, two frames of brood and the adhering bees, with perhaps five empty combs from the upper story (the two hives we sold had a full set of combs above as well as below); the Flanders hive we swarmed by shaking about half the bees only in a new hive, and giving them, as with the others, two combs of brood and five empty combs from the Langstroth hives.

All three made good strong colonies, and in October (same year) we prepared the six for winter, and took out over 100 lbs. of comb honey in frames, after giving an ample supply for winter. As no bee cholera has ever been known in that locality, we were not surprised to learn that all of the six wintered finely. They stood out doors on the summit of a hill, within half a mile of Lake Erie, and the wind was often such that the covers of the hives required to be fastened on; yet they had no covering except the cloth quilt we used, they of course being confined to the lower story. They did well, because their food, although natural stores, proved to be wholesome.

This season our friend, finding artificial swarming so simple, decided to do it himself, and would doubtless have done it all right, had not the six "simplicity" hives we sent got delayed somehow, so that four swarms came out and at least *two* went off. However, he made swarms from four of them, and three of these we have just examined and found in nice condition, but the fourth contained no queen, and only a handful of bees, and as the greater part of these were drones, we presume they failed in rearing a queen and the drones came here from other colonies. With these few Italians, however, we found the combs clean and no trace of the moth miller. We saved out some comb honey after giving the nine colonies an ample supply, and learned they had extracted about 200 pounds, which had been sold for 25c., making an income of $50 besides the value of the three new colonies, which were fine Italians: all the result of our friend's own management, entirely.

We were amused to find that our friend had used the bottom boards to the simplicity hives *upside down*. No harm had resulted, except that a few pieces of comb were built below the bottom bars.

Now we have an idea that this would be most an excellent arrangement for wintering, for all dead bees would fall into this space and be easily thrown out in the spring, and we should also be relieved of the necessity of having our shelves more than a foot wide in the bee house (see page 26, April No.,) which would give us more room and greater ease in handling the hives.

As the bottom boards are usually more or less soiled, and the covers are not needed in-doors, we can simply put *them* under the hives instead, so that our bottom board can remain on the summer stand all winter, and will be ready when we set them out in the spring, door step and all. In this case it would probably be well to paint the upper side of the bottom board as well as cover, but we really don't know from experience whether the painting of the bottom board would assist or retard the efforts of the bees at tidy housekeeping. We have always found them quite ready to appreciate all efforts at tidiness, such as sweeping the dead bees away from the front of their hives, etc., and one colony persists not only in cleaning away all loose sticks, gravel, etc., but actually tries to pull up the weeds and grass when we are so careless as to permit any to start.

Well, our cover inverted under the bottom board of course closes the entrance, and we hope we are infringing on no one in considering lower ventilation unnecessary. Now, so far as this we have had experience, but in confining the bees to their hives entirely by putting a sheet of wire cloth over the frames (under the quilt) we have not; but still, as we have decided to try our own in that way, we shall describe our method; if we dislike the arrangement we can at any time remove the wire cloth. In order to have these sheets of wire cloth fit nicely and not have their edges rough and inconvenient, we shall have them lined with strips of folded tin. These will be put close down on the frames and the quilt over them about the last day the bees can fly before going into winter quarters, thus giving them time to get perfectly quiet before their removal.

Stocks that persist in keeping up an excitement can have the quilt turned back or even removed entirely; but with stores of pure, wholesome food we have little fear but that they will be quiet with the quilt tucked snugly over them, the wire cloth only being required when we are carrying them in or out, when we wish to make examinations or when they get restless toward spring and need additional ventilation.

Our readers will perceive that we again have occasion to remove the cover of the hive when wintering; in fact, we don't want covers on when they are in doors at all; and that reminds us that we have had as yet no satisfactory solution of Problem 10. The combs in the upper story we usually remove just before feeding, at the time when we look the colonies all over and select the best worker combs for the wintering combs, so that when brood-rearing commences in spring we are "all right to go ahead." After feeding, about the most convenient place for these surplus combs is in these same upper stories, and when carried away for that purpose the covers are needed over the lower one; when put out in the spring they are needed again until June, when we bring out our surplus combs once more. 'Tis true that by having the cover hinged permanently on the upper story, we may get along very well by shifting the combs into that, or the reverse, especially if metal cornered frames are used; and that is the way we have done, but this plan of using the covers under the hive almost necessitates loose covers. It is true "Scientific" gives us a plan on page 48, June No., but we never quite liked the way it worked, *i. e.*, it don't hold the covers firm, and is somewhat in the way.

We think Novice's solution under the head of Problems will be found to meet every requirement. We have just commenced using them on the hives now being made.

If our Langstroth hives are not all sold before going into winter quarters, we shall prepare them by tacking wire cloth over the portico, leaving the entrance blocks as usual, and covering the frames with the wire cloth and quilt, as above.

REPORT FROM ADAM GRIM.

THE hard winter, fearful spring and poor summer had almost ruined my stock of bees. By incessant feeding and doctoring, I have with the aid of the splendid fall weather, succeeded, not only in restoring my colonies to good condition, but increased them from 485 (I sold 30, and lost 105) to 850, which I will winter. I extracted no honey but secured 3,500 lbs of box honey for which I am offered 28c a pound. A. Fuerbinger, who lost only 3 colonies during winter and spring, out of 98, got from the remaining 95, 23 young, natural swarms, and 2700 lbs. of box honey which he sold at home at 24 cts a pound and 1400 lbs. of extracted, and his bees are in splendid condition. They are mostly good hybrids. This man makes, estimating his young colonies $8 per hive, clear $1000 from 95 colonies in this moderate good season. He is a cooper by trade, but says he will hereafter only make his own barrels, and put all his time into beekeeping. This is very encouraging, but I will give you another picture. W. Wolf here had, two years ago this autumn, 181 extra good and heavy stocks. He sold in all 17 colonies and had only $50 worth surplus honey last year and only $5.00 worth this year. He now has 39 colonies. Of course he laments over the poor season, claims that he has no luck, when in fact it is nearly all due to his carelessness. If he did not know what to do, I could excuse him for his failure. We

460, 253, 850,
have in this neighborhood, 45, 35, 134,
2661. 25. 60, 120, 3500, 200, 224, 500.
118, 59, 6, 12, 850 30, 24, 75,
100, 125, 60,
15, 17, 3, colonies of bees, or in all

1423, that produced 9078 lbs. of surplus box honey, and 2740 lbs of extracted honey. The above numbers of stocks include the young colonies, which numbered 550 colonies, leaving 873 old colonies which yielded on an average a little over 10 lbs. of box honey, and about 3 lbs extracted. But only three beekeepers extracted honey and a very little at that. This is a very poor show when compared with the season of two years ago, when my average yield was to my recollection, 73 lbs to every hive I started with in the spring,

Yours Respectfully,
ADAM GRIM, Jefferson, Wis.

P. S. I forgot to state that I took home last Saturday evening, 9 colonies of bees, in whose neighborhood a cidermill had commenced working that day. The owner of the farm stated that the bees had worked very briskly on the cider. Five of the stocks were not opened on Saturday—remained shut in by a wire screen put before the portico 8x12 wide until Monday night. I was terror-struck to see from a pint to a quart of dead bees in three of those hives. Several bees were examined and found to contain a large drop of some kind of liquid not in their honey bag, but in their extremities. This makes me think that cider is very injurious. Perhaps those bees would not have died if they could have discharged their fæces. Two years ago the bees of my home apiary had been weakened so much by working on cider, that they came very weak through the winter, and amounted to nothing at all the next summer. A. G.

Many thanks, Mr. Grim. We value the above report as it gives an idea of the profits of beekeeping as it really is, generally the country over, and presents no exaggerated inducements to beginners, that will be sure to lead them to disappointments. In regard to the cidermills, P. G. has insisted all along this fall that the number of dead and dying bees in front of our hives surely indicated something wrong. Novice suggested that it was only old bees whose span of life was "spun" out, but after sweeping the ground clean, in a very short time it was again strewn with their distended bodies, and many of our stocks are so sadly depopulated that if they all winter safely 'twill be a wonder indeed. Since the dry sugar experiments, matters have much improved with the exception of the time when many bees were lost in working on the dampened sugar.

◆

HOW NOVICE FED OUR BEES,

FOUR barrels of sugar were purchased about Oct. 1st, at an expense of 11⅝ c per pound. We could have had it for even 11, two months earlier, but we make it a practice as a general rule to buy as low as we can *when an article is needed* without attempting to speculate on the probable rise or fall of any staple commodity.

As Novice expressed a very sanguine belief that he could finish the whole feeding in three days if furnished with plenty of "tea kettles," the whole matter was turned over to him alone, and he commenced operations at 3 o'clock, Oct. 8th, the day being very fine though cool towards evening.

A large pine box lined with zinc, of capacity equal to four barrels, was the only material used, not found in every household, and this had been originally made for another purpose, but has been used in our apiary to keep empty combs in, etc. The barrels of sugar were in the bee house where they had been rolled from the car. Well, at 3 o'clock as we said before, this zinc lined box was placed in front of the bee house at about six feet from the door, the light ladder used to gain access to the loft, was placed so as to form an incline from the threshhold of the door to the edge of the box over which it projected beyond the other edge of the box.

It is clear that with this arrangement but little strength and very little time was required in rolling a barrel up so that it rested directly over the box, removing the head and dropping the whole contents without waste into the box. The next operation was to pour the contents of a large washboiler of boiling water on said sugar, and as the quantity seemed insufficient the contents of the teakettle found on the stove were used also. The absence of said utensil, when preparations were being made for the evening meal, Novice failed to consider at all, and in fact had he done so it would probably have troubled him but little, for when he is at work at a project for shortening labor he seldom considers its bearing on other people or things, at the time.

When he judged that the boiling water for a barrel of sugar was sufficient, rapid dissolution was the next desirable point and a hoe was hastily divested of the greater part of the accumulation on its blade, when Mrs. N. ventured to remonstrate, on the ground that the garden hoe was hardly a tidy implement for such a purpose; he replied that she did him injustice for 'twas not the garden hoe, but the one used in the *stables*. (Novice here insists that with the aid of said teakettle of boiling water the hoe was made *perfectly clean*.)

Perhaps fifteen minutes was occupied in acquiring the art of using the hoe to the best advantage, which consists in making a channel in the sugar and then forcing the hot water along this with considerable force by keeping the hoe constantly submerged, and directing the current toward the sugar until it all disappears.

After supper, the undissolved sugar had settled to the bottom and the syrup above remained clear and about the desired consistency. A shelf was suspended in the box on which to place the feeders, and the syrup was dipped up with a coffee-pot and poured into them; whenfull the feeder was inverted on the shelf to see that none ran out, and then carried in this position to a hive that had been previously uncovered. Before returning, the next hive was uncovered and so on; by thus saving steps, *twenty hives* were each supplied with the contents of one of the tea kettle feeders, before 6 o'clock; and in short a whole barrel of sugar was made into syrup and fed to twenty hives in less than three hours. In proof that syrup can be made in this way without the addition of other ingredients to prevent crystalization, we may state that at this date, Oct 17th, the syrup is, the greater part of it, nicely capped over, brood is to be seen in all stages and a healthier state of affairs inside a bee hive we never saw. From previous experiments we were fully satisfied of this before, and we are inclined to think now that stores of *pure sugar* are healthier than where either cream of tartar, vinegar, or glycerine are used. About half of the twenty feeders were empty next morning, but some colonies take it so slowly that two days or more are required. As we have mentioned, with this first barrel everything worked beautifully, but the next afternoon another one was prepared precisely the same way, only that the extra teakettle of water was omitted thinking perhaps the first lot of syrup was a little too thin, the consequence was that more stirring was required and the syrup when cold produced a thin sheet of sugar on its surface. This has candied somewhat in the cells, has daubed the bees to some extent and they have been longer in taking it down, but these difficulties are only temporary as will appear further on.

Our first feeders were kept the proper distance above the frames by ordinary "teakettle ears" soldered on in such a way that two of them, and the screw cap for filling, formed three legs as it were, for them to stand on. Now these "ears" have a rounded end that forms a very insecure support, unless they are arranged very carefully to stand in the centre of a top bar to the frame, so insecure, in fact, that once or twice they have tilted so much that the syrup ran over the combs, on the bottom board and crystalized or hardened there, and to observe the effect we let it remain so, but have found, as we had expected, that "our bees" when they have finished their feeder go to work and work up all this sugar or candy; in fact we have never failed to have them do so, and this morning being a damp one we were gratified to find the bees busily working up quite a sheet of the candy that had formed in the portico, the hive having been tilted backward when the feeder "tilted," to save the syrup. We have observed such cases before but always find the bees, hive, and combs clean after a week or two. Still it is a nicer and quicker way to feed the syrup moderately thin, say about five quarts of water to 20 lbs. of sugar, instead of a gallon. Mr. Alley and some others who objected to our receipt for syrup as being too thick, were probably right about it and we hereby thank them for the criticism. It was overlooked perhaps, as we have been accustomed to add water to the sugar without taking the trouble to weigh or measure, nor should we do so now, for the matter is not one requiring exactness. If too thin the bees will quickly evaporate it, and if too thick it may cause them a temporary annoyance, but by bringing water they can soon remedy this fault.

A barrel of sugar contains about 300 lbs. and costs about $34.00, and divided between 20 hives gives 15 lbs. of sugar, worth $1.70. Who would not invest that amount per hive if they could feel sure that it supplied them amply with a food at all times wholesome?

Very heavy stocks, or those wintered out of doors, might require more before fruit trees furnished a supply next May; but we think the amount mentioned, safe in the majority of cases. Should any of our readers have colonies yet destitute when this reaches them, if they are *strong in bees* they can yet be fed up; and 'tis our impression that the very best stocks in 1874 will be those that were entirely out of honey in the fall and had stores supplied them entirely of sugar.

The manner of feeding just given we consider the quickest, simplest and safest of any having come under our notice: and Novice now agrees to undertake feeding 100 colonies their winter food in one day, providing the honey has all been previously removed and that he can have plenty of

TEA-KET-TLE FEEDERS.

Oh, yes—those "ears." Well, our tinsmith "run out" of "ears" (for tea-kettles we mean,) and before we knew it, had made a lot with supports formed of a piece of tin 1¼x4 inches, folded like a letter V, and soldered on in place of ears. These, having a point of support 1¼ inches wide, stand firm on any frame or across two; and we like them so much better that we hope he will never get any more *ears*.

We have tried a ring of tin for a support, but it "cuts bees in two" when we work fast and does not seem to afford them the liberty to work that the V shaped feet do.

◆

PROBLEM NO. 18.

CANNOT those bee keepers who own orchards of sweet apples and a cider mill do a thriving business in the fall in making cider honey. With very little trouble it could be so arranged that no bees need be killed or drowned, and we think the honey would command a very fair price, labeled as "Apple Honey." About six barrels of sweet cider would produce one of honey, we have estimated.

The objection is that such cider stores might prove unhealthy and thus depopulate our hives. But we imagine if the work were so conducted that no cider was allowed to ferment, no injury to their health would result. We have made the experiment of feeding a colony a gallon of sweet cider and it was quickly stored and produced very pleasant honey, altho' as they were working on sugar at the same time we could not well keep the cider honey pure. Of course the cider honey must all be removed before feeding for winter, at least until some experiments can be shown to the contrary.

A lady in this vicinity gave her bees a mash of boiled sweet apples, last fall to make up their winter stores. We gave her a caution at the time, but she was inclined to disagree with us. We learned in the spring her bees all died, but have not learned the particulars.

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.

Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

PRINTED AT MEDINA COUNTY GAZETTE OFFICE.

Medina, Nov. 1, 1873.

EXTRACTED honey has "got over" being a drug in the market.

◆

WE hold the remainder of our clover honey at 22c. retail, or 20c. by the quantity.

◆

WE are very careful to mail "Gleanings" correctly. Most of the failures have occurred where subscribers have omitted to give their county.

◆

THE price of "Gleanings" for 1874 will be 75 cents, and should we enlarge it, as we may do in case the circulation increases sufficiently, no farther increase in price will be called for. For $1.00 we will include photograph of Apiary, or it will be sent to any one sending us one name besides their own at 75 cents.

◆

IF there are any of our friends who have not received their queens or money when this number reaches them, we hope they will advise us of the fact at once. Our limited experience this fall has convinced us of the great advantages that would accrue to all parties if the queens, like other goods, could be shipped the day the order was received, *i. e.*, during the queen rearing months. Those old in the business may smile at the idea, yet we have faith that it can be done, and we shall endeavor the coming winter to make preparations to that effect. It seems to us that 'tis no very difficult matter for an experienced bee keeper, with fifty colonies, to rear one thousand queens in a season, and at one dollar each this would be a very fair income. Who will volunteer to assist in the work of disseminating Italian bees at prices which the masses can afford to pay?

HUMBUGS AND SWINDLES PERTAINING TO BEE CULTURE.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

"AMBROSIAL" HONEY.

AFTER some delay we received for our $2.00 the following:

H. H. FLICK'S AMBROSIAL HONEY OR BEE FOOD.

Entered According to Act of Congress, in the Year 1873, by H. H. Flick, in the Office of the Librarian of Congress at Washington.

RECIPE.

Fifteen Pounds White Sugar.
Four Pounds Soft Water.
One-half Tea-spoonful Tartaric Acid.
One Tea-spoonful of Salt.
Four Drops Oil of Peppermint
One Drop Oil of Rose.
1 oz. Gum Arabic (dissolved ½ pint of water.)

Put the whole in a brass or copper kettle and boil until all the sugar is dissolved, remove the scum and add 1½ pint infusion of Slippery Elm, (2 tea-spoonfuls of Slippery Elm bark grated, and 1½ pint water make the infusion.) When nearly cold add another lb. of good Honey.

THIS certifies that A. I. Root & Co., of Medina, Ohio, are entitled and hereby authorized to make and use the Ambrosial Honey for their own use or Apiary, and no other, nor shall they sell to any one or in any way make it known to others.

Given under my hand and seal this 4th day of Sept., 1873.

[L. S.] H. H. FLICK.

By referring to our last number our readers will see that Mr. Flick claims to have invented this during the winter of 1871-72, with the assistance of the "expert New York chemist," costing him nearly $500, etc., etc., but it is really nothing more than a copy of the old honey recipe, without a single addition or improvement. In fact our readers will find the whole, with some valuable comments and suggestions thereon, in Dr. Chase's Receipt Book, *published in* 1867. The whole book can be purchased for $1.25—seventy-five cents less than Mr. Flick charges for his one receipt. In his advertisement in the Journals Mr. Flick mentions his artificial honey in a way that would lead readers to expect his Busy Bee to contain the process of making it, but when the circular is purchased (price 10 cents now) we have the smooth falsehood only instead, to entice $2.00 from the unsuspecting. From another part of Busy Bee we clip as follows:

"All the marvels of bee architecture and government, which so delight, charm and elevate the soul, point out to us a higher and lovelier state, where we shall not only see the Creator's wisdom reflected, but can see Him as He is. They are the Almighty's decrees, reflecting His wisdom, and cannot be violated with impunity. The patient and untiring aparian, who labors to unfold the mysterious nature of the honey bee, will, as he unveils the skill and power of the All-wise Creator, be taught a lesson well-calculated to elevate the mind above the gross and carnal, and he must be dull indeed who cannot here gather volumes of instruction and entertainment."

It is the greatest pity, Mr. F., that your pursuit has not as yet elevated *your* soul sufficiently to have deterred you from taking $2 from your fellow men for something that was already common property, and worst of all to pretend it was the result of your own researches. Has it really come to such a pass that whenever we see Scripture quoted or appeals made to the wisdom of our Creator, we must straightway look about to see what new swindle is being prepared for us?

We at first proposed that Mr. Flick should go in company with Mitchell, but we feel sure now that the latter would be ashamed of such small meannesses. Oh, yes, Mr. F., we want our $2 back. The recipe *is not* as represented. For bee feed, omit all the ingredients except the sugar and water. For table use it may do for a syrup, but no one would mistake it for honey. The slippery elm *will* cause it to ferment in warm weather (see Dr. Chase's book.) We have given the recipe to all our readers, and Mr. F. has good grounds for seeking legal redress if the law allows any in such cases.

◆

WE presume that courtesy and custom would dictate that a pleasant mention be made of the Oct. No. of the *National Bee Journal* just at hand, with Mrs. Tupper's name appended as Editor and Publisher; yet the whole appearance of the number is so unlike her work, and so little to her credit, that we forbear any criticism for the present, farther than that the number of typographical errors in many places seriously interferes with a proper understanding of the subject. Mrs. T. has not yet "got hold of the reins," we presume.

HONEY COLUMN.

JEFFERSON, Wis., Oct. 18, 1873.

MR. A. I. ROOT:—*Dear Sir*:—Bee keeping has added over $22,000.00, during the last five years, to my earthly posessions; my income is such that I would have no need to keep bees for the sake of making a living. But I am satisfied that I could not live a contented life without the keeping of a large number of colonies of bees, and therefore will keep them until I really get tired of them. Well, I have been in Chicago to sell my own and some honey I had bought of my neighbors. I called on C. O. Perrine, who had written to Mr. Fuerbringer that he was prepared to pay cash for all the honey he could get; and when I asked him if he could pay me the cash, if I concluded to sell to him he replied that he could pay no cash under 60 days, but would pay me 12 per cent. interest. He had formerly, once invited me with my honey to Chicago, under the same pretense, and I was forced to take his notes for thirty and sixty days, or remove the honey again after I had delivered it. I call this a mean trick. There is nothing that can make a bee keeper feel better than the clean cash for his surplus honey crop at the end of the season, [Have we a reader who don't intensely feel the truth of this remark.—ED], and to be forced to take notes of a very doubtful value creates quite an unpleasant feeling. After enquiry I found that great *solitaire* honey house of C. O. P. had lost its chief pillar. His former wife and almost exclusived manager of the house in Chicago for two years time (C. O. P., carrying on a honey house in Philadelphia,) separated from him last winter. After more careful inquiry I learned that C. O. P. only keeps above water by paying up old debts and making new ones. I think it is my duty to the American bee keepers to communicate this to you, as I had recommended C. O. P. as a honey house to which a large amount of honey could be sold at one lick. It is true after a forced drawing off of over $50, I got all my pay out of him, but other parties have not succeeded so well. I will only add that I sold my honey to some parties who are about to open a honey house under the firm name of the Chicago Honey Company, 360 Wabash Avenue, Chicago, and got a very satisfactory price and the cash for it. It will be carried on by the former Mrs. C. O. Perrine as principal manager, the little honey woman to whom I entrusted, after the great Chicago fire, my large honey crop of two years ago, coming to over $1,000, and who paid me promptly as agreed until C. O. P. came back to Chicago and then pay was coming very slow. And now Mr. Editor if you consider this of any value to your readers, I give you leave to insert it in your columns. Very respectfully,

ADAM GRIMM.

PROBLEM NO. 15 VERSUS CIDER MILLS.

WHEN our bees were removed to the swamp, the Quinby hive, the one containing our choicest queen, and four weak stocks, were left at home, and to keep these from the cider mill a quantity of dry sugar was spread out in the sun for them.

They very soon commenced on it lively, and finally, on the second day, became so vehement about it that we feared they would get to robbing each other; but on the third day were delighted to observe that they were working almost as peaceably as they did in the spring on their rations of rye and oatmeal, apparently having decided that it was common plunder, enough for all, and that there was no need of quarrelling over it.

After this there was no trouble, and when our whole fifty-seven were again safely on their own stands (Novice hardly slept nights during the *whole week* they were gone, and the "awful stillness" of the deserted apiary during the day decided him to turn Problem 17 over to those who have not so strong an attachment for home and its surroundings,) it was with some trepidation that a half barrel of sugar was temptingly spread out with a view of satisfying the hosts of winged thieves, whose passion for sweets had seemed satiable with nothing short of a whole cider mill. And right here comes a note to show that we have at least one friend far away who sympathzies with us fully:

ONTARIO, CANADA

MR. NOVICE:—You know what it is to wait for the "ambrosial" receipt, and yet you don't mind keeping your readers in suspense about "bees are working quietly on a half barrel of sugar."

ENQUIRER.

Thank you, "Enquirer." You give us courage to enter into details without fear that the subject may interest others less than it did us. Well, as in the first experiment, we soon had a "hubbub." The bees that found the plunder first, coming home laden, put their companions in a frenzy, and in their eager haste took wing before they received directions (if they ever do, which we are inclined to doubt,) and all the premises were visited—bee house, kitchen, cistern, pump—all the hives in turn, until we began to almost wish we had not tried such an experiment; but finally most of them settled down at the right spot, and labored "with a will," as Mrs. Tupper has it, at the dry sugar, as reported just as we were going to press last month. Very soon it was evident, from the number around the pump, that water was in demand, and Novice soon took up the idea that *with* water in abundance they would fill up for winter their *own selves.* Brilliant idea! Tea-kettles finally superseded. A watering pot was procured, and the sugar dampened, until where hundreds of bees had been working before, we had thousands, and the voyaging around the neighborhood in quest of the mine of sweets by bees which hadn't found it, became alarming. Clusters of bees were seen tumbling over each other on the sidewalks, several squares distant, and everybody was inquiring what so many bees were doing everywhere and into everything; but Novice persevered, and dampened the sugar anew, until all did really seem working into the hum of honest industry. But a new trouble presented itself. Such a temptation was too much for "bee sense" in October, and the vagabonds wouldn't stop when it was dark, nor when 'twas rainy and cold, and after seeing them gorge themselves at such unreasonable times that they were unable to get home, the sprinkling part was omitted, and they now work on dry sugar when 'tis pleasant as quietly and happily as one could wish.

This is really an important point, for although the amount stored is small, it gives at all times a steady increase of stores, and prevents the possibility of any colony starving, however weak they may be. Our nuclei for rearing queens began to improve at once, and although drones were mostly gone before the experiment, our queens most of them became fertile, and we filled many orders for dollar queens on which we had concluded to return the money. We have also induced them to work on meal to some extent, when placed near their sugar, but not briskly. This is the more desirable, as we have a number of colonies so weak that brood-rearing is almost our only hope of saving them. In fact, we have just discovered two colonies so reduced that the queen has ceased laying entirely, and no brood in any stage is to be seen; and this state of affairs occurs Oct. 14. Without some of Hosmer's skill, we shall assuredly fail in wintering them.

As they had a fair number of bees a month ago, we can only attribute the loss to the cider mill, for thousands of bees were unavoidably worked in with the pomace.

It is principally when making sweet cider that they seem most demented in pursuit of the spoils. In conclusion, we most earnestly urge that bee keepers and owners of cider mills arrange troubles of this kind in a friendly and neighborly way, for quarrels in such matters *only* result in increasing the annoyance on both sides.

In removing the honey preparatory to winter feeding, we found it to possess a decidedly apple flavor, something like apple preserves, and as our cider mill neighbor refused compensation, we sent him a couple of jars of the aforesaid honey.

◆

WE have retailed hundreds of lbs. of extracted honey this season at 20c., while extra nice comb honey by its side waits a purchaser at 30c.

ANSWER TO PROBLEM 10.

FOR each hive you will need two pieces of rather heavy galvanized iron 2½x¾ inches. Three holes are to be drilled in each of these, one in the middle and one near each end. It is somewhat difficult to make it clear on paper, how these are to be used, but we will try. In the simplicity hive, it will be remembered, a strip goes across under each end of the cover, and two four-penny nails are used to nail this strip into the end of the longer strips. Now instead of the four-penny nails, use sixes, and drive them through two of the holes mentioned in our hinge pieces, this will leave the strip of metal projecting (containing the third hole) down over the body of the hive: and it is plain that if we drive a strong nail through this hole into the hive, we have the cover hinged quite substantially. To make it removable 'tis only necessary to make the last mentioned hole in the strip with an opening in one side in such a way that when the cover is raised perpendicularly it can readily be lifted off. A cover with the strips attached forms a gauge by which to drive the two nails on which it turns, and if the cover and hinge strips are alike, any cover will fit any hive. Still farther by driving two nails in the same way at the bottom edge of the hive, the cover can be readily attached to the bottom for wintering, which see in first article. By using a metal hook on the cover and one nail for it to hook over, on both upper and lower edge of the hive we can fasten the cover in a trice to either the bottom or top of the hive. In making the device we were agreeably surprised to find that the cover when raised up would stand alone, which it will not with common hinges. We can furnish the hinges or hooks for *one cent each* if desired. To work nicely the opening in the strip of metal should be ⅜ of an inch from the lower end and should be deep enough to just reach the center of the strip, the strip being nailed flush with the stick to which it is attached both top and side.

Novice says he has made this matter a study at odd times for over a year and that before he had reduced it to its present state of cheapness, efficiency and simplicity, it cost him, he really believes, as much brain work as did the *Ambrosial Honey Mr. Herman Flick.*

Any kind of a pair of hinges requires at least eight screws. Novice's "great invention" requires none.

P. S.—Since writing the above Novice has so far improved it as to be able to present a hive having no external indications of a hinge whatever, and yet the cover is hinged very firmly and lifts off when straight up as before. It differs from the above in no respect only that the strips of galvanized sheet iron forming the hinge are nailed *between* the strips that go around the cover instead of on the outside; and before nailing the hive, one of the side boards is sawed slightly shorter on each of the four corners, in such a way that space is left just sufficient for the metal ears to crowd in. Now drive a nail just right, down through the opening in the ear or hinge, and if your work is accurate, the cover works *just beautifully*, without a screw or nail more than is used in putting the hive together ordinarily. Novice keeps opening and shutting the hive every hour or two, and then looks for somebody's hat to sail in token of victory of—of, hard and persevering study over lumber and metals.

◆

HEADS OF GRAIN FROM DIFFERENT FIELDS.

NO. 106.—I have a strong nucleus. How, or can I keep it over safely?

M. B. DAVIS, Petersburg, Mich.

It is possible to winter even a small nucleus hive, as many experiments have proved; but it is very difficult unless a warm, frost-proof cellar be at hand, and even then the greatest trouble comes in March and April, when it is important they should begin rearing brood. Weak colonies, as a general thing, may be wintered easily in a proper repository; but the trying time comes when they commence flying in the spring in search of food.

No. 107.—Would you advise or approve the introduction of artificial heat, of steam, or of a stove from an adjoining room into the bee-room in severe weather, when it can be done without disturbing the bees?

B. ALOYSUIS,
Corporation of New Milleroy, Iowa.

We would not advise artificial heat, at least until we had good evidence of its utility. 'Twould be very difficult to prevent some stocks from getting too warm, and we think, with such a house as we have advised, there would rarely be need of it, more especially if the room contained 40 or 50 colonies. It might be beneficial to weak colonies or nuclei, should any be so unfortunate (as we are now) as to have such, and a correspondent writes that our "lamp nursery," described last month, was just the idea he had been after, to moderate the temperature of his bee house in the most severe weather. We may make some such experiments ourselves during the coming winter.

◆

A STRONG colony *can be* wintered without a queen, but we are not sure that it pays.

◆

THE bees that were fed the "gallon of sweet cider" looked decidedly like the "bee cholera" during a cold "snap" of three or four days.

◆

HERE we are again "all full," having used only two of the "Heads of Grain" out of nearly a whole field of valuable ones all ready for the printers. Novice says "taint his fault," for we must either make our Journal larger or get our friends to manifest less interest in his work of hive making, feeding, etc.

"NOVICE'S" Gleanings in Bee Culture. 1873

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY.

VOL. I. MEDINA, O., DEC. 1, 1873. No. 12.

STARTING AN APIARY.

No. 12.

KIND READER: As we only proposed to give an article with the above heading for each month in this year, we are now near the completion of our task; and, before commencing in another year's volume

HOW TO CONDUCT AN APIARY,

we feel like pausing with a feeling somewhat akin to that experienced by a young man or woman when first settling down by themselves, as "children no longer." We presume you are all "started," after some sort of a fashion, at least, and, perhaps; some are depending on us to some extent to tell them what to do next.

We have tried to impress upon you the importance of having all work with bees done up in its proper season, yet we are pained to receive quite a number of letters from those who had not fed their bees as late as November. While this is bad and may result in heavy losses, there is still a chance.

A neighbor of ours came to us in December, a few years ago, and asked if his bees could be saved, stating that some boys had turned the hive over and robbed it of all the honey and nearly all the comb. As it was a box hive the bees had clustered on the stumps of comb remaining in the top, and he could not think of letting them starve. We told him the case was nearly hopeless, but as he was determined to try feeding them, we directed him to nail a fine fanning mill seive over the hive to keep them in, and to place them in the cellar, the hive inverted, and to feed them on sugar syrup sprinkled through the sieve on the cluster until spring. This he did and they came through strong enough to build new comb in the spring and swarm beside. Since then we have heard of other instances on a larger scale, when winter feeding turned out badly. Perhaps the secret is to feed only so fast as they consume it, and then we run a risk of starving them unless fed daily.

We have another instance of a swarm being wintered without a *particle* of comb, the amount of honey they required being given them daily.

Although the editor of the *Bee Keepers' Magazine* replied to correspondents most positively that bees *could not* be wintered without comb, we have sometimes thought it might be the safest way, could they have their food furnished them promptly without trouble. A "log house" made of sticks of candy might do, and if any among our readers try it we hope they will report. In this locality we usually put our bees indoors about November 20th. Many of our colonies are now quite weak, owing to their "cider diet," we think, and as these have not got their stores sealed up well, we anticipate some losses before spring. The colony that had the "gallon of cider" have *no* sealed stores and we should give them some from other hives were we not desirous of testing the matter still further. We are pretty well satisfied now that cider acts almost as a poison to bees when confined to the hive by cold or otherwise, and shall take prompt measures next season to keep our bees busy elsewhere during cider time.

See your bees often in winter as well as summer and try and know at all times their exact condition. Many of us have succeeded finely in wintering one or two hives at times when their prospects seemed very doubtful; can we not now, when we have our dozens, or hundreds, do the same thing over again if we give them attention in proportion.

With best wishes to all who have followed us thus far, whether they accompany us through the year of 1874, or not, and hoping our efforts to assist in "Starting an Apiary" have been productive of some good, we remain, as ever, hopeful and willing to labor for the rewards that another year may have in store for us.

◆

NORTH AMERICAN BEE-KEEPERS' SOCIETY.—The next annual session of this society will be held at Louisville, Ky., commencing the first Wednesday in December and holding two or three days.

IS IT WELL TO UNDERTAKE TO WINTER A QUEENLESS COLONY?

WE are sure there are at least a few of our readers who have seriously asked themselves this question, and, without claiming we have done it ourselves, we will tell you what we do know of the matter.

In our experience in queen rearing during the past summer and fall, a friend called on us, and in discussing the matter of having young queens attacked by their own bees, he suggested that this almost invariably occurred during an entire absence of eggs or brood in the hive; and that the bees worried the queen because she *didn't lay eggs* for them to take care of. Perhaps we may here remark that our experiments did not fully corroborate this theory, for we have had queens attacked when about ten or fifteen days old even with brood and eggs in the hive, but we think the unsealed brood helped to prevent it.

Well, we so far fell in with the idea that we determined to keep eggs or unsealed brood constantly in all of our queen rearing nuclei, then numbering forty or fifty. Now in case the young queen be lost in any way, it was plain that a new one would be reared, from this brood or eggs, which made it quite desirable that all these eggs should be furnished by our choicest queen; and Novice proposed the Argo queen be kept furnishing eggs constantly, to be taken as soon as laid and distributed among the fifty nuclei, "just to keep them busy enough to be out of mischief."

"But you'll ruin our 'Argo' colony," protests "P. G."

O, no," says Novice with animation, "for we will keep them supplied with brood from other hives, and a prolific queen like that one will lay two or three thousand eggs daily, when necessary."

Accordingly the hive mentioned was deprived of all the eggs it contained and an empty worker comb interposed between two brood combs. After about 48 hours we almost invariably found this comb nicely filled with eggs. These combs when thus filed were cut into strips about 2x3 inches, and when put into the nuclei were so thoroughly cared for that almost every egg produced a bee. As each square inch produces about fifty, each slice adds to the population of one nucleus something like 300 full blood Italians. In order to have the comb of eggs taken care of without fail it should be inserted in the center of the cluster of bees.

Our combs will cut so as to give about sixteen such pieces, and in order to give one to each nucleus about once a week, our "Argo" queen was obliged to lay over 2,000 eggs daily, which she would do readily if sealed brood was constantly kept on each side of the comb in which we wished the eggs deposited.

Would all those eggs have produced a like number of bees, had they remained in the hive? Most assuredly not, but where they *do* go to, we are not now prepared to determine. One thing is very certain, and that is that nearly every queen lays a much larger number of eggs, both in spring and fall, than can be used for brood, unless a great part of them be taken care of by *other queenless colonies*, or colonies containing queens that don't lay.

Perhaps our readers have remarked with what eagerness a colony, destitute of eggs or brood from any cause, will take to a comb containing eggs, and how surely each of these eggs will produce a bee.

To get round to the point from which we started, then our course would be to winter a queenless colony, just as we do the rest, providing they contained sufficient bees. As soon as practicable in the spring we would insert a comb in the cluster of a strong colony, just long enough for the queen to deposit a few eggs in it, and give this to the destitute colony and about once a week repeat the operation, giving a few more eggs each time. Of course they will rear a queen which they may keep until nearly time for drones to appear, when she should be killed to induce them to rear a good one. The colony from which the eggs are taken suffers almost no loss at all compared with that sustained where combs containing sealed brood and larvae are taken; and likewise the queenless colony will undertake to rear only so many of the eggs as they can conveniently take care of, whereas had sealed brood or larvae been given them they would many times have allowed the greater part of it to perish.

It is our opinion from the experiments we have mentioned that one good queen could be made to furnish eggs thus, sufficient to not only keep up the population of one dozen colonies, but to slowly build them up. We should advise such a course only to those who think it a pleasure to work with and handle bees, admitting, of course, that by far the easier way is to have a good queen in every stock, but as queens are sometimes lost in November or the winter months, 'tis well to consider what is best to be done in such a case. Our readers can probably recall many instances of producing good strong colonies of those found queenless in the spring, when timely aid has been given. Getting eggs in the combs is a simple matter, but getting these eggs hatched into larvae by the *thousands* in one hive, at any desirable season of the year, is yet an unsolved problem. See Problem No. 12 and 13.

WE expect to be able to furnish back numbers to all applicants, and the price for Vol. I. will be the same as Vol. II. Both will be sent, with photograph, for $1.50.

BEE KEEPERS' CONVENTIONS.

BEE KEEPERS' CONVENTIONS where organized in your own immediate vicinity, without doubt, should be attended, and those large affairs, which we are expected to travel over whole States to reach, may be a good idea for those possessing ample means; but to the masses, those who keep bees as a source of income, and not for pastime merely, we should unhesitatingly recommend some other investment of the money, so far as money is concerned. How much real good have conventions accomplished? The National Convention at Cincinnati was well worth the investment to see Mr. Langstroth and hear him speak, but a vast amount of time was wasted in useless controversy scarcely pertaining to bee culture. At Cleveland we really cannot find that all the good accomplished, was sufficient to overbalance the injury done by the promulgation of erroneous theories; and at Indianapolis there seems to have been nothing left but patent hive men and theorists who had as little acquaintance with bees or bee culture, as the late N. Y. Farmers' Club had with farming, and still worse, no one seems to have discovered their mistakes in time to prevent their going out before the world through the press. Candor compels us to go so far as to state of the numerous reports of different conventions sent us, (for which we hereby tender our thanks), that we have found nothing contained in them sufficiently new or important to entitle it to a place in "Gleanings," unless we except the address of Mr. Quinby, alluded to in our March number. The expense of attending distant Conventions would generally much more than cover the cost of all the Bee Journals published—perhaps Langstroth's and Quinby's work besides—and we must think a careful perusal of these would be a more profitable investment of the money.

ONE of the health journals has an article on the adulteration of sugar. Now the only part of it that concerns us is the possibility that our A coffee sugar may be other than chemically pure, say ninety-nine per cent. pure. We can conceive of no substance with which it could be adulterated, having the taste of sugar or no taste at all, having the appearance of sugar, and being at the same time perfectly soluble in water; and shall accordingly consider it safe bee food, for all times, places and under all circumstances. Some of these "Health Journals" in their anxiety to secure patients for their "Institutes," make queer discoveries.

PERHAPS it may be as well to state that our article on Conventions was written and sent to the printers for last month's Journal, but was crowded out. Mr. King's report of the Michigan Bee Keepers' Association, in some respects, would rather corroborate our opinion of their value. If there is no misprint about it, Pres. Bingham in his address said:

> "Patent right men were that class of persons who have made bee culture what it now is, as a pursuit, and were the first to demonstrate the possibility of profitable bee keeping. Yet they are misrepresented, abused and maligned by a class of persons of which ——— is the representative type, who are a hundred times more unprincipled than the patent right men themselves."

And before he gets eight lines further, in the same strain, he eloquently sums up thus:

> "And what has been the result? Simply this, that bee culture as an occupation, is a failure. This is no idle assumption. Statistics afford ample proof of this. Ninety, of every one hundred persons, who keep bees, have utterly failed. Nine out of the other ten, will no more than pay expenses, while the remaining one is more or less successful."

Mr. B. was certainly driving vehemently at some idea, and we should give it as above to our readers as Problem No. 19, were we not in doubt as to whether it relates to bee culture at all. If patent hive men have made our pursuit what it *now is*, and ninety-nine out of one hundred (bee keepers not "patent" men) "don't pay expenses," why ——, but we give it up; our readers will have to "puzzle" it out for themselves.

The first subscriber on our books, for 1874, is Adam Grim, who has netted $22,000 in five years. The next is R. Wilkin, Cadiz, Ohio, we don't know *how much* he has realized from bees, but do know he has a pleasant way of paying *cash down* on some pretty large bills for queens, etc. Now as we have no idea that our pages would contain the list of successful ones, we would respectfully solicit the names of all of our subscribers who have lost money in bee keeping during the last five years. Tell us all about it and we'll give you a department, and call it "Repository of Blasted Hopes." If it don't unfold some tales of "deeds to make and use," our name ain't—

"Now, Mr. Novice, if you don't stop, there won't be any room for 'Heads of Grain' *this* month."

"Never mind we are soon to have our paper larger, to make room for those 'Blasted Hopes,' and then——."

NOVICE'S
Gleanings in Bee Culture.

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

Published Monthly, at Medina, Ohio.

Terms: 75c. per Annum.
Any one sending us 5 Subscribers can retain 75c. for their trouble, and in the same proportion for a larger number.

[PRINTED AT MEDINA COUNTY GAZETTE OFFICE.]

Medina, Dec. 1, 1873.

IMAGINE Novice's consternation at finding the types in the *A. B. J.* carelessly allowed to make him say he had "more friends than he *desired*," when it should have read *deserved!*

◆ ◆ ◆

AFTER the "cider" colony had dwindled down to less than a pint of bees and were evidently near their demise, they were handed over to the tender mercies of P. G., at her earnest solicitation, and they are now humming merrily under the combined effects of clean dry comb, candy, sugar syrup, and a warm room. We propose to follow their adventures, should they survive long enough to meet with any.

◆ ◆ ◆

SHOULD we offer chromos and the like as premiums, some might be induced to take our little Journal on that account. and not for *its own* intrinsic merits. This we would not have, much as we would like to see its circulation increased, and when it can not still *continue* to make its way simply on account of its value to bee keepers, we will "bow and retire," still having full confidence in the discriminative appreciation of our American people.

◆ ◆ ◆

IN our notice of the *Bee Keepers' Journal* in our Jan. No., we mentioned that it was to be hoped the "patent hive feature" might be removed, and we are now happy to state that such is the case. See advertisement. Chromo's are certainly less objectionable, when 'tis optional with the subscriber whether they have them or not, and as the *National Agriculturist and Bee Journal* is offered for $1.00, withou any premium we consider it quite low, for so pretty a family paper.

OUR index to Vol. I, of "Gleanings," will be given in our Circular and Price List for 1874, which will be issued this month. It will be mailed to all subscribers as soon as out, and will be sent to any one else on application.

◆ ◆ ◆

Nov. 21.—"P. G." insists that the bees should have been housed before this severe wintery weather, but Novice says there has been no suitable weather for moving them, and that just as soon as the hives are dry again he will fix them all nicely.

◆ ◆ ◆

NOTWITHSTANDING the fact that "Gleanings" will be considerably enlarged, besides being printed with *new type, new press,* and on *new paper,* for 1874, we shall furnish it for only *fifty cents,* in clubs of ten or over. Any one sending us ten names at 75 cents each can, of course, retain $2.50 for their trouble, and all over 50c. each, for any additional number. Additions to clubs may be made at any time, and when the number reaches ten, we will credit the amount that has been sent us over 50c. each.

◆ ◆ ◆

SHOULD any be so unfortunate as to have bees destitute of adequate food for winter when this reaches them, we should advise using plain candy. Mr. Wilken, of Cadiz, O., has just paid us a visit, and among many valuable items given us, he mentioned that he had frequently saved colonies even in midwinter under circumstances like the following: An old Quaker had two colonies in December that had stores insufficient to last them a month, and had left them to their fate, as he couldn't "fuss to feed them." As Mr. W. was pressed for time, he proposed to save both, for one of them as payment in the spring, which proposition was readily accepted. We think a dollar's worth was purchased, the hives were inverted, and the sticks pushed between the combs, the two colonies being placed in a cellar, of course. Our friend saw no more of them until the following summer, when he found both had swarmed and all were doing well. The owner gladly paid him for candy and trouble, and went his way rejoicing. Mr. W. was unable to add that (so far as he had observed) candy stores were a preventive of the bee disease, although his experiments have been only with such as had partially enough *honey* to winter.

Dr. Chase's Second Receipt Book is a considerable part of it devoted to bee keeping, and the author has been wise in securing articles from only those who have been successful in the pursuit. We would suggest that Mrs. Tupper's prize essay, before being copied further. be thoroughly revised. by herself, up to the times, as it was written many years ago. Col. Hoit's article is for the most part quite safe and reliable, but his statement that "A swarm of bees put in a clean hive, will build their own comb and do much better, than a swarm put into a hive with the combs already built," is rather a grave error and one calculated to do much mischief. A new swarm will frequently gather ten pounds or more of honey the day after being hived. if they have combs in which they can store it, and the queen will also nearly fill a comb with eggs in the same time, giving them a great start in advance of those having no comb. We cannot see how a single experiment ever made, with two swarms coming out on the same day, could have given a result unfavorable to the hive furnished combs. As the Colonel used movable comb hives. we can't account for his want of experience in the matter. As Miss Katie Grimm's experience with the extractor is given in another place there is a chance for the Dr's. readers to give modern bee keeping something like its just dues after all. We really believe the book contains nearly all the truly valuable receipts afloat. Price, ——. Address Dr. A. W. Chase, Ann Arbor, Mich.

◆

In the *Rural New Yorker*, of Sept. 27th, *Prof.* C. V. Riley attempts to justify his course in advising retaliation as a remedy against bee keepers, whose bees are supposed to have injured neighbors fruits. He advises to plant the milkweed, that the bees may be ensnared thereby and the hives thus decimated to such an extent that they "give out," etc., etc. To say nothing of the folly of such a proceeding, which would almost parallel that of "removing the meeting house" because an offensive, deceased snake lay behind it, is it not strange that a man with *Prof.* written before his name, should imagine that neighborhood troubles of that kind, would be peacefully adjusted by such measures as poisoning each others bees by "fly poison" (cobalt and arsenic), and that retaliation would not follow retaliation, until a case resulted that could only be settled by the law, and, as often happens, the States prison walls might close about one or both of the parties. We feel confident that the very persons Prof. Riley cites, would be reasonable and fair could they be brought to talk over the matter in a friendly manner. We bee-keepers, Prof. R., are for the most part certainly an independent and reasonable people, and whenever our bees are annoying our neighbors we will make good the damages and take prompt measures to abate the trouble. Bees in our locality do not injure fruit, although many seem to think they do. The matter has already been discussed so much that we have no room for more of it here.

HUMBUGS AND SWINDLES PERTAINING TO BEE CULTURE.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

G. H. BOUGTON, Illiopolis, Ill., and Will R. King, Franklin, Ky., are complained of as having received money for queens and refusing to answer letters of inquiry relating thereto. In answer to our letters of inquiry, Mr. Boughton makes no reply, and as the *Bee Keepers' Magazine* has given him the position he has earned for himself, we drop him. Will R. King answers at length and we give the following extracts from his letter:

"In reply I would say that I sold a large number of queens in the spring and summer of 1872; very many of my orders I filled the fourth and fifth time, complaints coming that the queens died in the cage before being released, &c., &c. Some said that they arrived dead, others that they were so near dead that they died before being introduced, &c., &c. Several sent *what purported to be* statements of Post Masters and Express Agents, certifying that they were dead, or dying, or going to die, or did die, or might, could, or should have died, &c., &c. All such complaints were listened to attentively, and more and more queens were sent. I became suspicious that I was being played off on; and it turned out that some of these *so-called* certificates of P. M's. and express agents, purporting to be signed by the same parties, were in fact written in different hands, &c. I feel fully satisfied that I was swindled out of at least 200 nice, pure queens."

Mr. K. goes on with much more in the same style, says he never received any money sent *by mail* unless letters were registered, etc. Now can any one for an instant think so badly of our bee keeping friends as to believe that there are those among us who would send for queens the *fourth or fifth* time after they had received one in good order. Our experience has been quite the contrary. Not a dollar has been lost so far as we can learn out of over $200 sent for queens. Our customers have been more patient and forbearing than we could expect, and in a few cases when queens were lost directly, by our own carelessness, we really felt ashamed of ourselves on receipt of kind and courteous letters informing us of the mishaps, without implying in the least that we were expected to make good, losses occasioned by our blunders. It has been our impression for the last year, from the tone of letters received, that our people have been so abused, humbugged and imposed upon, that when they do send money by mail, they hardly expect to be treated as a fellow-being. The evidence against Mr. K. (see *A. B. J.* for Oct., page —) is at present much stronger than any that he can bring against our friends who read the Bee Journals.

◆

HONEY COLUMN.

I HAVE 300 or 400 lbs. of nice Basswood honey that I will deliver at the depot for 18c, and 100 lbs. of dark honey for 16c. HENRY PALMER, Hart, Mich.

Machine extracted honey has sold with me first-rate so far. I have sold since July between 7000 and 8000 lbs. With the exception of about two bbls. it was all put up in 1 and 2 lb. jars and in ½ lb. jelly tumblers. Of the latter only a small quantity, of course. I have a first-rate retail trade for machine extracted honey and I am sure that in a short time the extracted honey will be the only honey called for. In a show window I have an assortment of different jars of honey all put up at the same time and from the same lot, hence the same honey; some of the honey has crystalized perfectly white, other jars next to those crystalized ones, or above or below them, are perfectly clear yet. What is the reason for this difference. Remember the jars being closed in the same manner, keeps them alike air-tight, of course. I wish to answer that question so often asked, "Why does that jar of honey candy and the one next to it does not," a little more satisfactorily than with my present "don't know." I don't remember of having seen the question of crystalization discussed in a Bee Journal, and it will interest all to let the knowing ones come out on that topic. C. H. MUTH, Cincinnati, O.

We at one time found the candying process a great drawback to the sale of honey, but now really think it an advantage, and our customers, too, have learned to consider that which candies first, the best honey. 'Tis true it is some trouble to get it out of barrels when in the solid state, but we manage to get our barrels into the cellar of our store, near the hot air furnace, before frosty nights, where it never gets colder than about 50°. We fill jars from these barrels with facility by means of a molasses gate, filling several dozen at a time, as they may be needed. These jars of honey candy, of course, as soon as they are exposed to a temperature of 30 or 40°; but this we care little about for we can at any time restore it to its original appearance and flavor by melting it. The most convenient way of doing this in our own family, we have found, is to place the jar for several hours on the reservoir of our Stewart stove, or if some honey be wanted in a hurry, the cap and rubber is removed from the jar which is then placed in the back oven; should the honey be too thin and need "ripening" it can be brought to any desired consistency by continuing the process, and we must confess to a weakness for clover honey so thick that it requires to be handled with a knife in very cold weather. Our children make a very beautiful candy of honey in the same way, working it as they do molasses candy. As we can not give Mr. Muth a single idea as to why one jar of honey candies sooner than another, we'll stop.

I have about 400 pounds basswood honey, extracted and in good order, all stored in jars from 10 to 50 pounds. I should be very glad to sell it at 18 cents net cash. My honey is thick and I do not see how anyone can have better.

JOSEPH DUFFELER, Wequiock, Wis.

◆

LUCK IN BEE KEEPING.

NOW, sir, I want to tell you there is such a thing as luck in keeping bees: they may be managed ever so well and then bad luck comes in. I will tell you how it happened. I had some of my best Italian stocks close to my house and treated as you gave in "Gleanings" for winter. The very best stock was stole right from under my window, last Sunday night. I felt as bad about it as I should if it had been one of my horses. Now, Mr. N., if your tea-kettle feeder is not patented I wish you would tell us how, and with what, you keep the syrup from running too fast for the bees to take away. M. RICHARDSON,

Port Colborne, Canada.

We are really sorry for our friend and can offer no remedy unless it be to make the high board fence around the Apiary, *thief* proof as well as wind proof. If 'twere possible to tell who were the unprincipled depredators could not they be told kindly that we would give them the honey *twice over* rather than have them destroy our choice Italians. We feel sure their better feelings might be appealed to. Our friend has not tried the tea-kettle feeder we think. Atmospheric pressure keeps them from leaking, on the same principle that a small mouthed vial will hold water when inverted.

◆

LATEST—NOV. 22—Bees are nicely housed.

HEADS OF GRAIN FROM DIFFERENT FIELDS.

NO. 108.—In your bee house, in winter, what is the exact temperature you would constantly maintain, if possible? The temperature of the general atmosphere outside of the hives, I mean, with the tops off. Hosmer lays stress on having *all under ventilation closed*. He lays so much stress upon this, that one might hastily conclude that a perfectly tight-fitting bottom is what he advocates—what he uses successfully. My knowledge of physiology and chemistry teaches me that in every instance, a perfectly tight hive—an air tight hive—would fill up with the *carbonic acid gas*, from the breath of the bees. G. C. CORBIN, M. D.,
St. Johns, Mich.

Our correspondent need be under no apprehensions that Mr. Hosmer's hives will fill up with carbonic acid, for, as they are of the "American persuasion," there will be ample room for all gases to crawl out or in through the innumerable crevices, even when closed as best they can be. Our bees are usually quitest at about 40°.

No. 109.—How shall I free combs from old pollen? Will the bees do it themselves? How to separate the old bees from the young so as to have nearly all young bees in the hive at the beginning of winter. All my hives are two story and both stories are now filled with bees. The lower story will not afford sufficient room for all the bees and 10 sheets of comb. The upper story, of course, I shall remove as soon as honey ceases.
J. H. WILSON. Lexington, Texas.
September 1st, 1873.

Novice says your large amount of pollen is the secret of the large number of bees, and that you should save both by all means. Give the upper story a queen and plenty of stores and they will do as well as the other. Our bees always use their pollen in spring, besides usually large amounts of flour or meal. This is one of the cases in which it is desirable that both upper and lower story should constitute a complete hive when need be, *a la* simplicity.

No. 110.—If hives are kept shaded from the sun, are combs apt to break down in frames 11 inches deep by 17½ wide? (from front to rear). J. BUMGARDNER, Jr., Kimbolton, O.

Although there would be other objections to a frame so deep, (see. Prob. No. 4 and Heads of Grain No. 22), we should have no fear of combs breaking down from the cause mentioned. We have never had combs melt down but on one occasion, and then the hive was an American painted dark brown, nearly black, and was without shade. After painting the same hive white, we had no trouble, although left in the same situation.

No. 111.—I wish to know where silver hulled buckwheat can be got on fair terms this fall, for seed next season. Bees almost all died in this section last winter, I only saved one stand out of forty. Bought a few in the spring and, having plenty of comb, have increased to 32 stands. Hope to have better success wintering this time.
JONATHAN SMITH, Willow Branch, Ind.

Will some one tell us whether the silver hulled is any better than the common for bees. We have an impression of having heard that its value has been over estimated. We have now only one word of advice to those having lost bees wintering: S-U-G-A-R.

No. 112.—Friend Novice:—What does it mean, a queen that does not lay an egg; there is neither brood nor eggs in the hive.
M. KAPP, Poe, O., Sept. 12th.

It probably means they are short of stores. Give them at once enough syrup to make them feel good, i. e. fill up their combs nicely and if her majesty don't straight-way make a whole comb "sparkle" with eggs it is because *she* is bad. The former is most generally the trouble, however, at this season.

No. 113.—I think I could help you on the pollen question, if we lived near each other, by swapping combs, as I have a superabundance of it. Perhaps if you would raise an acre of hemp every year, your bees would gather enough pollen in the fall to supply their wants the next spring. I have heard that if bees are fed syrup on brown (rye and Indian) bread crusts they will eat all the soft part of the bread. Perhaps that might be fed in dull weather as a substitute for pollen.
S. ROWELL, Faribault, Minn.

Many thanks Mr. R. We shall certainly try the hemp next season, and we have made experiments, without success, similar to the last. Has any one else ever known bees to use brown bread as a substitute for pollen. We should like to send the $5.00 to some one.

No. 114.—Friend "Novice":—The pins, to designate the condition of the stocks to which the queen-rearing cards are attached, as suggested in the last number of "Gleanings" answer a very good purpose, so far as two of the centers are concerned. But for the center of the circle of figures, I prefer a tinned tack and two small pieces of zinc, or brass, one of them a trifle longer than the other, and arranged like the hands of a clock. Let the shortest one indicate the year and the longest the day of the month a queen was approved. For instance, supposing a queen was reared during the season of '72, then let the shortest index point to the figure 2, if during '73, let it point to the figure 3, and so on. In that way the cards, as now printed, can be made to indicate the age of the queen until the year 1901, and by that time some one may study up something better, and perhaps, *have it patented*. JAMES BOLIN, West Lodi, O.

We had thought of your device but considered it rather expensive, and feared 'twould get "out of kilter." We would suggest that one of the bent pins be put anywhere in the hive to designate the year. Imagination can suppose figures around it like a clock dial, and we keep record thus: Straight up, of course indicates 12, and slanting slightly to the right, 1; horizontally to the right would mean 3, and a little above horizontal, 2; while below horizontal a little, would be 4, and so on. The four positions up, down, right and left, being plain at a glance, a slight inclination from any one of these positions would indicate the remaining eight numbers, with little danger of mistaking, especially after some practice. This is an important item, for such records might be used to indicate numbers for a variety of purposes, for instance: our friend Shaw desires to indicate the hive from which he takes brood to rear queens; as his apiary consists of over 100 colonies, two pins might be used side by side, and reading the numbers designated as we read figures, we would have 33 by turning both to the right, 99 by turning both to the left, 63 by turning the first straight down and the second to the right, and so on. On the first, the positions 11 and 12 would not be used, unless we chose to go over 100, and perhaps 10 should always be read as naught. We hardly need add that the practice of marking hives up with a pencil is untidy, and besides a pencil is not always at hand.

No. 115.—I put into winter quarters last Nov., 108 good colonies of bees in good condition and came out with 24 pretty good colonies and 22 in a weak condition. The 24 gave us 3500 lbs. of honey, nearly all out of the comb, and increased them to 32. A litile after the middle of the honey harvest we smothered 2 of the best ones and got no increase from them. I have now 70 colonies and 4000 lbs. of honey in all, of the best quality we ever had; we have sold about 2500 lbs. of it at an average of about 24 cents per pound. My bee house is a second story, with saw dust walls 14 inches thick and well ventilated. I think bad honey was the cause of our loss.

P. W. McFatrige,
Carthage, Ind.

We are obliged to our correspondent for two reasons. First because he really has done exceedingly well, and secondly because Mitchell, in his *Directory*, gives an account of what agrees in name, state and many particulars with the above; yet *he* states the result was obtained from *eight stocks* instead of forty-six. Quite a difference Mr. M., yet we don't know but 'twere wrong to expect truth from you at all.

No. 116.—I think you are a little too strong on your syrup theory for winter food, and if my bees winter as well this year as they did the last two years, I shall most certainly convert you to my straw mat arrangement. I don't feed at all, except in particular cases of course; and even the stimulating in spring, outside of rye flour, I have never done with satisfaction. The uncapping of a comb occasionally suits me much better.

C. F. Muth, Cincinnati, O.

Supposing syrup *no better* winter food than honey (we think all agree that 'tis just as good,) the great saving, owing to the difference in price, would always, we think, lead prudent bee keepers to use the sugar. We are already converted to Mr. M.'s straw mats as a means of keeping the bees dry and warm, and they may serve a better purpose than the cloth quilt, but we have always considered them about their equivalent. We have an impression that straw mats are untidy and are always scattering straws about. Is it not so? The colony mentioned under Heads of Grain No. 69, that we wintered on less than 1 lb. of food per month, was packed all over with fine swamp hay and kept in the cellar *right beside our cider barrel.* As we expected them to be out of food before New Year's, we tapped daily on the hive (?) to see if they responded, and to our astonishment, they did this promptly until the last of March, and then when set out *had nearly all of their one comb of sealed honey, given them in November.* There was less than a quart of bees in the fall, and few if any more in the spring, but they built up eventually to a fine colony. We attempted to winter our whole apiary of 40 colonies, the winter after, in the same way, only we didn't use the hay. We lost all but 11 with the bee cholera. We have many times since wondered whether the hay possessed some rare virtue, or if the "rapping" may not have had some talismanic effect. If we remember aright, not a dozen dead bees were found on the bottom board, but after their first flight so many bees were missing we feared the few remaining young bees would never get strong, but they did. We think the diverse reports in regard to spring feeding come about because the condition of the colonies differ: with one containing "lots of pollen," lavish feeding produces hosts of young bees; but where pollen is wanting, feeding with honey or syrup does little good. Rye meal, or anything they will take in lieu of pollen, *always* gives abundance of brood. Are we right?

◆

We "extract" the following from the Chicago Honey Co.'s circular. If they are not entirely in the right they are "most:"

"The honey thus extracted possesses a most delicious flavor, and can be eaten without fear of sickness. It is eating the Comb that makes one sick, the Bees never eat it, and phycians say there would be as much propriety in drinking ale from a bottle, and then eating the bottle, as to eat the Honey and Comb also."

ADVERTISEMENTS.

Advertisements will be received at 10 cents per line each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

AMERICAN BEE JOURNAL.—Established by the late Sam'l Wagner, at Washington, D. C. Now published at Chicago. W. F. Clarke, Editor and Proprietor. Subscription price, $2 a year in advance. Sample numbers sent on application.

BEE-KEEPERS, ATTENTION!—Send 25 cts. for three months' subscription to *National Bee Journal*, now published and edited by

ELLEN S. TUPPER, Des Moines, Iowa.

Liberal terms to Agents. Specimen number free.

ADAIR'S ANNALS OF BEE CULTURE.—The fourth volume will be issued in 4 quarterly parts, each the size of former volumes. At 50c. each. $2 per Vol. The first will be out about the first of December, 1873. Prospectus and Club Terms sent on application. Back Volumes, except the first, can be still furnished at 50 cents each, in paper, D. L. ADAIR, Hawesville, Ky.

DO TRY IT 3 Months for 10 Cents: or with $3 Chromo, for 50 cents: or six months with "The Flowers of Paradise," a first-class $6 Chromo, 15½ x 21 inches for $1. The National Agriculturist and Bee Journal is a sixteen-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75.** Send now for samples, and **Liberal Terms to Agents free**, H. A. KING & CO., 14 Murray St., N. Y.

Vol. II

GLEANINGS IN BEE CULTURE.

No. 1

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,
BY A. I. ROOT & CO.

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

[*Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.*]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
Some of our Exchanges........................ 2
How to Conduct an Apiary........................ 3
What is a Hive of Bees Worth?................ 4
Problem No. 19........................ 5
Can a Colony be Built up in Winter by Supplying Artificial Heat?........................ 5
Selling Receipts........................ 5
Editorial........................ 6
Cheap Bee Feed........................ 6
Review of the Bee Journals................6 & 7
Shall we Clip Queens Wings?........................ 7
Conventions........................ 7
Humbugs and Swindles........................ 8
"Blasted Hopes."........................ 8
Honey Column........................ 9

Page.
Reports Encouraging........................ 9
Heads of Grain........................ 9
Straw Hives........................ 9
Vetch, as a Honey Plant........................10
Eggs by Mail........................10
Wintering........................10
"Latest Intelligence" Corner........................11
Bee Journals and Punctuality........................11
About *Us*........................11
Quilts and Propolis........................11
Wine and Brandy Casks for Honey........................11
Receipt for making Comb Guides........11 & 12
Honey Labels........................12
$1.00 Queens........................12

Some of Our Exchanges.

The *Rural New Yorker* has been so many years almost a "household word" in many localities, we hardly deem it necessary to give it an extended notice. More than twenty years ago we recollect it as the brightest and most attractive,—to "us children"—of any of the weekly papers, and since we have kept bees many are the valuable items we have *gleaned* from its pages. Terms $2.50; less in clubs, D. D. T. Moore publisher, 5 Beekman St. N. Y.

The *Ohio Farmer* has, in years past, furnished many valuable articles on Bee Culture, and as an agricultural paper it certainly possesses a value to the people of Ohio and adjacent States, over the eastern papers of this class, on account of its value as a home paper. We take pleasure in adding it to our list and recommending it to our friends. The terms, $2, we think may be considered low for an agricultural paper of its size published weekly.

It will be observed that after the Bee Journals, we give the *American Agriculturist* a place at the head of Agricultural periodicals. We have a two-fold reason for this: First, that their department of Bee Culture, by Mr. Quinby, for many years past has been of much value. Secondly, the general tenor and tone of the paper. For years we have read their opening notes, and "Hints About Work," with a feeling of being benefitted and made better "every time," although "we" are not a farmer.

Their Humbug and Swindle department has been a great blow at a class of evils that threatened, for a time, to demoralize almost our whole population, and yet Orange Judd & Co. seemed to stand *alone* almost, in their position in regard to Gift Enterprises, Lotteries, Quack Doctors, etc., until within the last four or five years.

As a single illustration of how much the *Agriculturist* has helped us in different departments in life, we will mention that the "Hexagonal Apiary" given in April No. for 1873, was suggested by reading the very valuable series of articles by Mr. Stoddard in 1871, entitled, "An Egg Farm."

The ideas there suggested in regard to economical division of labor in making any branch of agriculture a specialty, is worth enough to pay for the paper a half dozen years. Could those same "Egg Farm" papers be obtained in book form, it seems to us they would interest and benefit a great mass of people who may perhaps never think of Poultry rearing as a business. We should say with all emphasis in regard to the *Agriculturist:*

Wide may it spread, and "long may it wave."

A year or two ago our attention was attracted by a piece of paper blowing along the streets, for said paper contained a picture of what proved to be a Bee hive. And after having captured the piece we found it contained a description of a hive by A. L. Hatch, Richland Co., Wis., (we fear we shall never get fully converted to thinking it best to tell only the *county* "a body lives in;") this hive, 'twas stated, could be made for a dollar, and the engraving much resembles our present "dollar hive," but it seemed to us, no adequate provision was made for a cover and bottom board that would be secure from effects of the weather, but we then felt sure, that with proper machinery, such hives could be made as good as need be desired for the sum mentioned; in fact we had them then in use but had not determined to offer them for sale. We gathered from the scrap of paper that it was a fragment of the *Country Gentleman*, published at Albany, N. Y., at $3 per year, weekly; and we have added it to our list, as may be seen on the cover.

We mention the *Scientific American* last on our list, and it may not be readily apparent to all just how it enters into the domain of Bee Culture. Well, in this way: It has been almost our constant friend from boyhood, and from it we have learned to judge of the strength and properties of wood and metals; of the uses and possibilities of machinery in aiding us in home affairs; of the chemical properties and values of articles for domestic use, with which we come in daily contact. It has aided us greatly in arranging our Windmill and machinery, and in devising the cheapest, strongest and most effective weather-proof hives; in a proper understanding of how we may economize labor in extracting honey; the laws which govern centrifugal force, etc. In constructing extractors it has aided us in deciding what metals are most economical, and in what shape we may get the greatest strength with least expense, etc., etc. Need we go farther? It will certainly prove a good investment to all who will take the time to read it, see advertisement.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " " 75 " "
" " Ten " " " " 2.50 " "
Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume 1, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

"Gleanings in Bee Culture."

DEVOTED EXCLUSIVELY TO BEES AND HONEY.

Vol. II. JANUARY 1, 1874. No. 1.

HOW TO CONDUCT AN APIARY.

AFTER wishing our readers all both old and new, a "Happy New Year," we would remark that we should be very happy indeed to be able to tell them *the best* way to conduct an Apiary during this month, if we could, but perhaps it may be as well to be frank about it and say in the beginning "we dont know." If colonies are all strong and the weather is cold perhaps the best advice we could give would be to say "let 'em alone." They might be given candy even now if any were in danger of starving but we hope none of our readers have been so improvident. Should your Bee House contain a large number of very strong stocks, during mild weather they may get too warm and become uneasy, or should the room feel close and have an unpleasant smell we would open the doors after dark and then close them again next morning before light. A caution is proper here, however, for 'tis to be remembered that our thick sawdust walls are as much to keep the inside *cool* at times as to keep the bees warm, and so we would never open the doors so long as a thermometer showed a lower temperature inside than that of the out door air. Many times we can keep the temperature at 40 degrees inside when it may be 60 or more at midday outside. Bees wintered out doors need no attention when they are healthy, unless it be to shade the hive, when they would get lost in a very light snow as has been so often recommended. To be frank again we have of late had almost as little experience with out door wintering as with *Box Honey*, yet we are always glad to get reports from its advocates. 'Twould be rather easier to stop here and not consider colonies that were *not* healthy and prosperous, for we really know of nothing we could recommend to be done for bees with the Bee Malady at this season, with much hope of success. *Actual experiments* so far as we know, such as taking the bees into warm rooms and feeding sugar syrup in clean comb, etc., at this season, do not seem to have been very successful. At the present time of writing Dec. 12, from reports we have been able to collect we should prefer to risk them at a temperature of 40 or 45 degrees, rather than 50 or 60, and if any change were to be made in the food we should if possible give them sugar syrup that was sealed up in the fall or summer; if this could not be had then candy. We believe Feb. or even March have been the worst months, and cannot help thinking that commencing brood rearing has something to do with the matter. See problem in this No. We strongly suspect that problems 12, 13, and 16 also, will be found to have a close connection with the matter. In looking for facts to guide us in the matter we glean from the back numbers of the various Journals as follows: *Bee Keeper's Magazine.* Vol. 1, pages 73 and 74.

"Will bees breed and rear young bees without being permitted to fly for a length of time?"

"Will the flour that is put in the sugar-candy recommended for winter feeding, supply to some extent the want of pollen?"

As the Editor gives no other answer except the brief monosyllable "Yes" to both inquiries he has helped us but little. The second query however suggests an idea that may be valuable. Mr Wilkin stated he had made some such experiments, but nothing definite had resulted.

In *A. B. J.* Vol. IX pages 137 and 138, we find something that agrees much with our experience, viz: that bees when confined to the hive during brood rearing, become rapidly depopulated, and to use Berlepschs' own words, "The death rate increases from day to day, the most of the bees becoming weak and enervated."

We presume this refers to a condition of things where pollen is absent from the hive.

Langstroth's Book gives us more information on the subject than all other sources combined, see pages 81 and 82, and he also mentions having succeeded in inducing them to use rye flour in the hive but this was during the month of Sept. To sum it all up it appears that brood rearing cannot certainly go on to any great extent without pollen, but we do know that brood is reared in strong colonies to some extent during Jan. and Feb. even when confined to the hive by cold weather. Should these same colonies be kept in a room warmed up to 50 or 60 degrees and confined to the hive, more brood might be reared if the supply of pollen was kept up, yet we have had no direct experiment to show that the health of the colony would not be seriously injured by such confinement; and as to building up weak colonies by supplying artifical heat, it seems that to do this they must fly out or have some such exercise. Whether this exercise can be given them in a way to answer the purpose and still prevent their being lost remains to be seen. There is one thing we can all do safely, and that is to provide a quantity of Rye and Oats ground together very fine for them to use as soon as spring opens. We would advise providing about one bushel for every ten stocks.

WHAT IS A HIVE OF BEES WORTH!

"MR NOVICE why cannot we sell bees too? We have been selling Hives, Frames, Queens, and in fact almost everything pertaining to Bee Culture except Bees. Now we certainly have no objection to selling a whole hive, bees and all, if they are willing to pay what they are worth to us. Now what is a fair colony of Bees worth? That is, how much shall I charge a friend of mine for one?"

"Truly, the point you mention needs consideration. If our bees are valuable to us they would probably be so to others, and to those who prefer buying a colony all in working order rather than to undertake the task of transferring, Italianizing, etc., it certainly is no more than proper that we should have some kind of a regular valuation for them; but our queens—we dare not warrant them pure, how about that?"

"Oh, we can make our estimate with 'dollar queens' and then if the one under consideration should have proved herself extra we can add a proper amount for desirable qualities; Messrs. Shaw & Son offer tested Queens for $2,50. and should one have proved herself extra prolific besides, estimate her at from $3 to $5,00. as the case may be."

"Very well, then we have only to decide how much a colony's bees, combs, and contents of the combs are worth, and add them to the value of Hive (one story) Quilt and Queen, and—here, give us a pencil,——

Last three items, from our price list are worth	$2.25
Ten frames of comb, metal corners and fair average of worker comb, each 75c.	7.50
Four quarts of Bees worth per quart 1.00	4.00
Pollen and brood etc. contained in comb say,	2.25
Total	$16.00

Should the queen prove equal to the task of rearing three banded workers 'every time,' call it about $18.00 and if *extra* prolific $20.00 perhaps. If in addition to all of these the hive should contain sufficent bees to occupy an upper story at a season when these bees would be available for honey gathering or Queen rearing perhaps $25.00 would not be an extravagant price, in our own locality."

"There, Mr Novice you have gone and considered the "bright side" of the subject only, but 'tis for all the world just like you.

If a "quart" of Italians are worth a dollar, how much are hybrids and even black bees worth? and then suppose the queen *does not* rear three banded workers but only two, one or possibly bees without "ary" stripe, what is *she* worth? and supposing that combs should be black, and crooked, and nearly all drone, or or not built half way down; or supposing our colony had neither honey or pollen, and that there wasn't even *one* quart of bees, how much would a swarm be worth then? Be frank now for even in our Apiary we occasionally have Hives having some, if not all of these faults."

"Well, well, give us a little time and a better pencil and we'll take all the 'dark shades' into consideration too, let us see, to go back to $16.00 and take the 'down grade,' we shall have to fix a value on dollar Queens that turn out hybrids, and as we have repeatedly pinched the heads off some fine ones, we will value them at only 25c. and as to black queens, well really, we never heard of selling them at all, until *Mrs. Cotton's* circular quoted them at *five dollars* each, but as we promised not to 'comment' we will only say that we could only consider a black queen tolerable until we could replace her with an Italian. Hybrids we will rate at 75c. per quart, and blacks at 50c., drone combs (as good for extractor) at 50c., and we really can't rate old dark colored combs any less if you women do persist in thinking new white ones most valuable; if the frames are only partly filled, we'll say 25c. each, and now (where's that pencil again,) we have value of a poor swarm of bees thus:

Hive and Quilt	$1.25
Black Queen	.00
Ten frames of comb partly filled at 25c.	2.50
Half a 'quart' black bees at 50c.	.25
Contents of comb	.00
	$4.00

There, how will that do?"

"But Mr N. we don't often have such a colony (all bad) in a simplicity hive, it would more likely be found in a box hive, or what is it they call 'em at the south?"

"Gum?"

"Yes 'Gum.' Had'nt you better subtract $1.85 from the four dollars for hive quilt and frames, and call a—the——"

"Gum? 'Tis really too bad that your education has been neglected so much that you have never seen one. We should not value *them* any higher than common Queens, but Mrs Lizzie Cot——."

"But you are not to mention her any more, you know."

"Well our colony of Bees we mean, and at *two dollars and fifteen cents* we really think you cannot accuse us of not having considered the value of poor stocks as well as good."

"But do you really mean Mr N. to value the combs of such a colony at $1.90 and the Bees and Queen at only 25c.?"

"We do; for a very small colony of Black Bees even in the hands of an expert would be very uncertain property; but empty comb can be kept any length of time and we fear has never been properly valued. As 'tis a tedious job to fasten pieces of comb into frames we shall if possible endeavor to have all comb made in such frames as we prefer in the first place, and if not filled out they are always ready for the bees to take it up right where their predecessor left off."

Before closing it may be as well to consider that many large sales of Italian Bees have been made at figures considerably less than the estimate, for instance, Adam Grim sold R. Wilkin, we think something like 50 colonies of choice Italians in good movable comb hives for $11.00 each, in the spring of 1872. Transportation from Wisconsin to Ohio cost a little more than $1.00 each only. As the above was given from memory it may not be exact, but we think is not far out of the way.

Bees like other stock or merchandise, should be sold at lower rates in large quantities, perhaps it would be fair to estimate that a Bee-keeper could as well afford to sell 50 colonies at $12.00 each as to furnish a single one at $18.00, taking into account trouble of preparing them for shipping etc., etc.

Just as we are finishing, friend Patterson, of Freestone, writes to know how many combs a colony should cover in Oct., for instance, to enable them to winter. Now to give a careful guess at it we would say that if you do not see bees clustered in at least *three* spaces during a cool day, you had better not undertake to winter them. If they can be seen in four spaces, call them fair; five spaces good, six spaces fine, and seven, "tip top." More bees than the latter we should not consider desirable for one queen.

PROBLEM NO. 19.

WHAT are the necessary conditions to insure healthy brood-raising in winter, should it be desirable? It is pretty generally agreed we believe that full colonies winter much safer than Nuclei and many times we have colonies that have been weakened by different causes in the fall to such an extent that the attempt to winter is unsafe to say the least, and yet they have valuable queens. Now where we have many such it would well repay the expense of a room artificially warmed and all cost of food could we thereby get them up into good trim to stand it until spring opens.

There seems to be a difficulty in the matter of brood rearing during continement to the hives, but little understood. Our experiments given on another page as yet (Dec. 12,) have produced nothing very encouraging. To be able to build up a colony at pleasure during any month in the year (as we do in June for instance) and thus have a full Apiary of extra strength independently of the weather whenever we choose to invest the necessary amount to acomplish it, Novice estimates, would be an acquisition calculated to give Bee-keeping a great start, and that the desired information would be worth $100 at least to us alone. We cannot raise good queens in winter 'tis true (or at least we suppose it is) but if it is really true Florists and Market Gardeners have become able to rear almost everything in the vegetable kingdom at pleasure regardless of season, why cannot we rear bees in stocks where we have good queens? P. G. fears 'tis almost an impossibility, but Novice remarks "we have ultimately succeeded with so many difficult points during the past season, why may not careful study and experiment vouchsafe us a similar reward in this; and may not such research at the same time unvail the mystery of the Bee disease?" Who among our readers will help? We shall be very glad of reports.

◆

Mr. Quinby's excellent article in the *Agriculturist* for Dec. on wintering bees, contains the following:

> "That syrup of sugar does not prevent it in such weather was proved in many cases the past winter where the combs were filled with it and nothing else, and were badly soiled before the bees failed."

Now in the great number of reports we have received, no such have ever come to hand where the bees were fed in time to seal their stores. Thin, unsealed syrup has in some cases seemed to be unwholesome, yet not like honey after all. We really hope Mr. Q.'s suggestion of keeping the bees in a room warmed artificially to a temperature of 50° or thereabouts, may be practically a success, as bees never suffer thus in warm weather.

Could they be allowed to fly out there would be no trouble, but we fear it would not do to fasten them in at that temperature, more especially toward spring. Darkness *will not* keep them in at such times, for we have had them buzzing about our ears when the room was dark as "ink in a stone bottle," and the worst trouble with dysentery we ever had was in the winter of 1868, when February was almost as warm as April. The bees were in a cellar and had natural stores. We could not keep the cellar cool even by opening the doors and windows nights. As Mr. Q. says, a good strong, *healthy* colony of bees seem to be almost oblivious of any degree of cold, yet after they get thinned down or weakened by disease, cold seems to operate disastrously, and a room warmed artificially for such, we think might save them. We have one just such, now near us; the bees seem bright and healthy, but the queen looks very small and thin, and we find no eggs in the combs. We have (to-day, Dec. 1,) just inserted a comb containing pollen, to see whether it will start brood-rearing.

Dec. 4th.—We find the queen has deposited eggs quite plentifully, although the pollen given them did not fill more than 2 doz. cells.

Dec. 9th.—Found eggs in combs as before, but nothing more. Placed the pollen next the eggs and improvised a wire house for them to fly in, which they did, but few of them got back to the hive without help.

Dec. 10th.—Gave them flying room in an upper story with wire cloth on top; with one corner of the quilt turned up they got back to the cluster without trouble. Kept the temperature to-day 10° or more higher by placing the hive over a stream of air warmed up to about 70°.

Dec. 18th—No eggs, but the bees look quite healthy, and have died very little since last examination. Pollen remains in the comb, all, or nearly all of it.

◆

WE entirely agree with the *Agriculturist's* view of selling receipts. Of those offered for sale at prices ranging from 25c. to $10, or more, we have never found one yet so offered of any value, and the same thing is almost invariably found more intelligently given, free in our Receipt Books or through our Scientific Journals.

◆

SHOULD the bees get uneasy during warm spells of weather in winter, the doors or windows of the Bee House or cellar should be opened during the night. If they are confined to the hives by wire cloth this is all the more important. After they have been once quieted down and induced to go back on the combs the temperature may usually be allowed to come up to 40 or even 50 degrees without again making them uneasy.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

MEDINA, OHIO.

Terms: 75c. Per Annum.
For Club Rates see Second Page.

MEDINA, JAN. 1, 1874.

In answer to several inquiries in regard to the "tea-kettle feeder," we would say that it is neither patented nor *patentable*, nor is the idea of soldering perforated tin over the mouth of a tin fruit can, or any other utensil, for feeding bees, patentable.

◆

On the wall opposite are a very pretty pair of chromos. They were received from H. A. King & Co., as samples of those they offer with their Journals. While we should not think of estimating their value at $5 or $10 each, we certainly consider them well worth the price they ask for them to any one *wishing to purchase pictures*.

◆

WHEN we quoted from Pres. Bingham's speech last month we had not learned he had said "Novice" where Mr. King had placed a blank, nor did we know that he had a "patent hive" "all his own." Novice rubs his nose meditatively on receiving the above items and remarks something about having supposed he had finished that piece of work and "got everything swept up clean."

◆

This No. with our circular will be sent to many who are not subscribers, but hereafter none except sample copies will be sent unless paid for in advance; *no exceptions*.

We prefer to send Gleanings to none except those who really value it, and we should be very sorry to intrude it upon any one who might consider it an unwelcome visitor; therefore we accept no evidence of its being sincerely wanted other than the customary remittance of the modest little sum of 75c. or less in clubs.

◆

MRS. TUPPER, in her Nov. Journal, says: "But if we must have a rule for the syrup we will say a gallon of water to four lbs. of sugar." Now we thought Mrs. Cotton's "feed" at *six cents* a pound very cheap even if the recipe did cost $10.00, and had we not wasted all our money for the "Ambrosial" we might have sent for it; but Mrs T.'s plan is cheaper and she don't charge anything either. Let us see, a gallon of water weighing eight lbs, and sugar four, makes 12 lbs., and total expense is less than 48c., or 4c. per lb. and we really think it the "most wholesome food that can be made," only we fear 'twould be like the old gent's discovery, viz: that sawdust was excellent food for cattle when mixed with bran, but a queer fact was that the more bran he used, the better was the "feed." We presume Mrs T. meant one quart of water, instead of a gallon, but she should remember that "little pitchers sometimes have very long ears."

We believe the consistency of the syrup as we find it sealed up by the bees is at about the rate of 20 lbs. of sugar to a gallon of water, with sugar at 11 1-2 c., the real cost of syrup that will compare well with honey and will certainly *go as far* for feeding, is very near *eight* cents per lb. When feeding must be done does any one doubt which is the cheapest? We have just sold our last barrel of Clover honey for *twenty* cents.

◆

Bee Keeper's Magazine for Dec. contains an excellent article by Mrs. Tupper, entitled, "All About Hives." Her view of the subject is liberal and broad, with a clear view of wants and needs of future Bee-keepers. Her remark that "the time is coming soon, however when honey will not be sold in the comb at any price," is rather a bolder assertion than even Novice would make, yet we think it quite probable, We can hardly agree with her that bees *should not* be examined in winter, for our view of things, if we had waited until March, for the past two seasons, might have been a sorry one.

We have supposed that a good many had been saved by nursing them through the winter, and that "a stitch in time saved nine," etc., but it may be our efforts availed little after all. So many report having wintered finely in cellars where vegetables were kept, and where lights and footsteps were matters of daily occurrence, that we are inclined to think the disturbance occasioned by frequent inspection not injurious.

The suggestion that Novice claims to have first discovered that bees could be wintered on sugar is certainly a grave error, but that he first advocated the idea in print that sugar stores for winter was a remedy for the bee disease, and hence safer as well as cheaper, we shall maintain until some document be shown to the contrary. If Mr King does not *yet* feel satisfied to recommend sugar in place of honey we would advise him to carefully record the results of the great number of practical experiments made of that kind.

A remark made in the *A. B. J.* intended to express our disapproval of the plan of not giving residences of correspondents, perhaps implied more than we intended it should, but we confess to a dislike of finding when we reach the end of an article that 'twas from plain "John Smith" with no other earthly clue to his whereabouts; and although we cannot say we feel satisfied, 'tis the better way, we must admit we have had the subject presented us from a standpoint of view we had not heretofore considered, and that there are some very cogent reasons for withholding the full name and address. We hope we shall never be unwilling to acknowledge an error or injustice when satisfied we have committed one, whether it be commonly considered derogatory to the Editorial character or not.

Filling pieces of comb with syrup as Mr King advises might have given very good satisfaction in 1863, but we fear our modern Apiarist would hardly be content with so slow and laborious a method; and does he consider too that in selling the Peabody Extractor he encumbers his patrons with a *patented* machine that must be eventually laid aside for the superior light running home-made ones? 'Twould be idle to argue a point that demonstrates itself so readily by actual experiment.

We most heartily approve of Mr King's method of furnishing hives of any kind ordered from manufactories close at hand, and we commend the Dec. No. of the *Magazine* as particularly valuable.

◆

We were certainly much pleased to receive *Mrs. Tupper's Journal* for November done up in a style so neat, and with such an attractive cover that we never should have recognized the old *National Bee Journal* at all, were it not for the name. We shall have to conclude that woman's taste is certainly equal, if not superior to that of the sterner sex, in such matters. The typography and general appearance of the whole fully agrees with its appearance externally, and the whole work certainly does her credit. We wish her a large list of subscribers. Mrs. Tupper's Journal is certainly valuable, it could not well be otherwise, and right here we would ask why it can not be *called Mrs. Tupper's Journal*, and thus aid in making it *possible* to explain to our friends that the *National Bee Journal*, was a separate institution from the *National* Agriculturist and Bee-keepers Journal of N. Y.

Mrs. T. says "Novice does not differ so widely from other Bee-keepers as he would have us suppose," which we are well aware of, for what was considered some of his most extreme views a year or two ago are now being echoed in a way that would sound very much like some who say when forced to concede a point, "why, we always said so." Now Mrs. T. your other remark that: "It has always appeared to us singular, to say the least, that in no one of our bee journals is found mention of another—each one ignoring utterly the existence of another," was rough on us, for in our opening No. we certainly did notice all the Journals, and there were more then than now, and we did also notice your own *National Journal* so well that one of the associate Editors wrote "awful bad" to us; if you meant that Gleanings *wasn't* a Journal we shall feel worse still, for our Feb. No. informed you that 'twas constituted a Monthly as soon as the first No. was before the public.

If Adair's *theory* that bees breathe through their wings be true, and that "a queen with a clipped wing is like a man who still lives though a part of his lungs be gone," how will he explain the fact of queen's living and thriving with no wings? Is it possible in his experience *practically*, he has seen no such? We remember one of our best queens, in fact the mother of the colony that gave us the 330 lbs. in a season, had both wings gnawed off close, probably in being introduced, and she was equally prolific for two seasons at least.

Queens two or three years old are frequently almost destitute of wings. Our opinion of conventions was mainly intended for those who had not made bee-keeping profitable, and we have no reason yet to change our decision, that those who make their bees most profitable *are not* those who are foremost at our large conventions. Mrs. Tupper's report of the North American Society certainly contains much of value, and we tender her our thanks for giving it to the people in a correct and valuable shape, but we are pained to find that she again insists that Extracting injures the brood, totally ignoring the mass of evidence from those who have for years been in the habit of extracting honey by the ton. If conventions are to be valuable they should embody *at least* enough practical bee-keepers to keep down Adair's folly, and Mrs. Tupper's inexperience with the extractor.

It may be well to add that 'tis only necessary to clip a very small portion (to avoid marring their beauty) of one wing of the queen to prevent loss in swarming; we have lately been informed that Adam Grim clips the wings of his queens in his whole Apiary of nearly 1000 colonies.

WE this month omit the usual heading of this department out of respect to the sex of delinquent. Our readers can each and every one determine for themselves as to where she should be classed.

A subscriber writes, enclosing circular:

"As you have gone into the recipe business, I herewith send you a circular fram 'away down in Maine.'"

As we always prefer to hear both sides of all questions, we dropped the lady a line, which elicited the following:

I will only say that I hold myself responsible for all statements made in my circulars, and shall hold you responsible for any statements which you may publish in relation to me or my business.

Respectfully,
LIZZIE E. COTTON.

P. S. Much is often gained by minding one's own business, or,

"To speak a little plainer that the *point* you may see,
Is it any of *your business* what *my business* may be?"

Now it seems to us the lady certainly cannot complain if we assist her in advertising, by giving a few extracts from her circular, without note or comment, and without any charge whatever. We clip as follows:

Cotton's Controllable Hive. I have succeeded after many costly and unsuccessful experiments, and careful and determined investigations, in constructing a hive which used in connection with a new system of management, original with myself, is destined to work a complete revolution in the management of bees.

The capacity of my hive for surplus honey is 31 glass boxes, containing when well filled about 4 lbs. each. These hives are so arranged that the bees have *direct* access to them from the main combs of the hive, without passing through any partition or obstruction whatever. Bees *invariably* enter these boxes without manifesting the slightest hesitation. They *never* remain idly clustering on the outside of the hive, as is so often seen in others.

Controlling or preventing swarming. I claim that I have solved, so as to render available to *every* bee keeper, this *leading* point to *successful* and *profitable* management of bees. *Everyone* who is acquainted with management of bees will readily see the great advantage arrising from successfully controlling or preventing swarms. I am able with my hive to obtain either swarms or surplus honey *at will*. When swarms are desired I arrange at the commencement of the season to have them issue, and when surplus honey is preferred, I with a very simple process original with myself, turn the whole force of bees to storing honey, and at the same time keep up the same increase of bees as if swarms were allowed to issue, and to those who have not tested the matter it is surprising what quantities of honey a colony of bees not allowed to swarm will collect over one casting swarms. There have been several plans advocated for controlling or preventing swarms, but all have failed.

Food for bees. Feeding bees is sometimes *absolutely necessary* to save the stock from starvation, at other times it is desirable to feed to induce early swarms, and at other times feeding is resorted to for the purpose of filling the brood section of the hive with honey of inferior quality for the use of the bees, in order to secure in boxes all that is collected from the fields by the bees. I will here state that I am an advocate of feeding under each of the above circumstances, and I have labored to prepare a food which will suit the tastes of bees, and not prove injurious to them. I have succeeded in preparing a food for bees which meets all requirements, besides being *very cheap*, costing only about *Six Cents per pound*. Bees readily store it away in combs, and will build combs for storing it, when fed on this alone; and whether fed in large or small quantities, no bad effect is produced upon the health of the bees. Bee keepers who have attempted to feed have generally found it up hill business, the bees many times refusing to take up the food furnished; at other times they have found that it has incited the bees to robbing, and many stocks have been destroyed by robbing, when the prime first cause was an attempt to feed some weak colony, as after bees have once been rendered furious by plundering a weak stock, or by being fed all together in the open air, they often venture to attack strong stocks, and thus many stocks are annually destroyed; and bees as usually fed frequently become diseased, suffering from dysentery, etc., through the winter, and often die before spring from this cause, or if they live through the winter they are so weak in the spring as to be of little profit that season. But with my food no such loss will be experienced. This food fills a want long felt by bee keepers. *I warrant it the best food for bees that can be produced.*

PRICE LIST.

For a vigorous colony of Native bees in Controllable hive, with full and minute directions for management, safe arrival at end of express route guaranteed	$25.00
For vigorous colony of Italian bees, other conditions same as above	30.00
For an empty controllable hive with directions for management	15.00
Italian Queens	10.00
Native Queens	5.00
Glass honey boxes fitting Controllable hive, each	15
Recipe for the manufacture of food for bees	10.00
Feeders, made to fit any hive, singly $2.00; per dozen	20.00
Smokers	1.00
Bee veils,—a perfect protection from stings	1.00

Address, LIZZIE E. COTTON,
West Gorham, Maine.

January, 1873.

DEAR NOVICE:—I like your little paper very much, and one reason why I like it, is because you are always ready to go for all swindlers and humbugs, especially Mr. Mitchel, who swindled me out of ten dollars for a pretended device to fertilize queens in confinement. He fairly promised me that if the thing would not work as he said, he would refund the money; but after he had the money he refused to answer every letter that I wrote about it. So "go for him" and all other swindlers.

J. M. MOHLER,
Covington, Ohio.

DEPOSITORY OF

Blasted Hopes,

Or Letters From those who have made Bee Culture a Failure.

DEAR NOVICE:—Although I am taking Bee Journals, I am destitute of bees now. During 1871 and 1872 I lost all I had, viz: 15 colonies of bees called Black. Not one left. "*Dysentery! dysentery!* They were all I had: and were purchased by getting a $1 here and a $1 there: and getting one colony here and another there, etc., etc. All is gone. Also bought two counties of the Buckeye Bee-hive. It proved worthless, and I lost my house and lot here by it, thus throwing me flat. But I must have bees next year—1874. What can you do to start me in *Italians?* Give advice, and aid me under these difficulties if you can. I can handle bees quite easily.

Kindly, Yours,
J. DRUMMOND.
Kygerville, Gallia Co., O., Nov. 20th, 1873.

Now if it should come to pass that there is no remedy for the Bee-disease, there certainly is one for losing money in patent rights. Never invest in rights or receipts, but get one or two colonies some way honestly and build up again. Don't expect, or even accept of aid unless it comes as a just equivalent of fair, honest, days works; you can then feel that your possessions however small are *all your own*, and you are thus far as independent as the best among us.

Honey Column.

I HAVE 200 lbs. of comb honey, also 1600 lbs. of dark extracted, for which I ask 20c. per lbs. all through. All my honey so far sold—at retail—has brought me a net of 28 to 30c. per lb.

JAMES HEDDON,
Dowagiac, Mich.

I have 400 or 500 lbs. of extracted and 250 lbs. of comb. I raised 1500 lbs of the latter and 800 of the former. Price for comb in frames 20c. per lb., for extracted from 10 to 12c. per lb., delivered here.

J. L. DAVIS, Holt, Mich.

Since above was set up we learn Mr. D. has sold all his extracted honey; and all the honey in our neighborhood has been sold for 20c. per lb., by the barrel.

REPORTS

Encouraging.

APIARIAN REPORT.

NUMBER of Stocks in the spring 26, of which 3 were queenless. No. of stocks at date, 40. No. of lbs. of surplus honey stored this season—mostly in 5 lbs. boxes, 1500.

D. P. LANE.

Koshkonong, Wis., Nov. 1st, 1873.

Had 3 hives last spring, increased to 8, and 60 lbs. of honey. Respectfully, Yours,

C. C. MILLER, Chicago, Ills.

Bees have not usually done very well around here, especially where comb honey was relied on, have seen but one box of comb honey in this town this year; but by the use of the extractor and plenty of empty comb, I got from 8 swarms—some of them quite weak in the spring—three new swarms—natural—and 1026 lbs. extracted honey, and have more honey not extracted, than they will need for winter. Have sold all my honey for 15c. per lb., wholesale. Honey is now scarce.

I think you are hardly fair in proposing to publish "the names of your subscribers who have *lost* money in bee-keeping during the last five years;" they are not the class of bee-keepers that subscribe for GLEANINGS.

S. ROWELL,
Fairibault, Minn.

I made an extractor from a suggestion in your paper. I live in a dairy region, so I took one of my cans—we send our milk to the cheese factory—put in a cross piece far enough from the bottom to have the top of the frame come to the top of the can, put in some wooden pins on the under side of the cross-piece, to rest on the bottom of the can, put in my gearing made from an old broken paring machine, and it worked very nicely. I could take out about 75 lbs., when I would have to empty, by pouring out of the top. I took out 600 lbs., and am confident that I should not have got 50 lbs. of box honey.

SUBSCRIBER.

All the stocks that we have now—over 40—are wintering in our cellar on their own stores, and appear in a fair condition. After selling some in the spring we had 39 left. I should say we commenced with 50 hives. We have sold bees, honey and wax to the amount of $429.13, and we can spare $100 worth more, mostly comb honey; this is nothing great, but will do, considering the amount of farm work I have done, all of which is respectfully submitted, notwithstanding the "Blasted Hopes." J. L. DAVIS & CO.

The Co. means my daughter, who will act as "P. C."

I have 81 swarms of bees, and have made over 5000 lbs. of honey the past season. I cannot well do without the GLEANINGS, so here is your 75 cents. I have sold my honey for 15 and 25c. per lb., and dont feel like giving it up.

GEORGE PARROTT.
Winamac, Ind.

Heads of Grain,

FROM DIFFERENT FIELDS.

NOVICE, what do you mean by telling us to see our bees often in the winter? You do not mean for us to ever *handle* them when they are in winter quarters, do you?

D. A. BROCKWAY,
Manteno, Ill.

Just this: That you go in the house after dark once or twice a week, and examine them by raising a corner of the quilt, or if bottoms are movable, raise the hive gently and see how many dead bees have fallen down, etc. It will be very convenient to have a lamp and matches kept ready for use.

Whenever your visits seem to arouse or disturb them, we shall say that you are careless, and we should not open the doors much during extremely warm, or cold weather.

Mr. Quinby's plan of warming up the room by a stove, we fear, would make too much disturbance, unless great care be used.

A neighbor of mine, and a Bee-Keeper, was traveling in the south part of our State last spring, and stopped at a farm-house to dine. He saw a large number of bee-hives in the yard, and a greater part of them were the old-fashioned straw hives. He enquired of the farmer how his bees wintered, and was told that all the bees died in the Yankee hives, "but all mine Dutch hives made mit straw, not von die;" and every one of them was strong and vigorous.

Now, Friend Novice, this report brought home by my neighbor, set me to thinking whether something might not be invented in the proper shape to hold our frames and bees, and answer the same purpose as the straw hive for out-door wintering, for all bee-keepers have not winter houses or cellars.

J. BUTLER,
Jackson, Mich.

Thanks for the item. We are well aware of the advantages of straw hives for wintering, see Quinby's Bee Keeping, page 73, but we really fear they would have little effect toward preventing the real Bee Disease. Can Mr. Quinby afford us any additional light on straw hives since his book was published? We have seen no mention of them in his recent articles on wintering. Mr B. mentions an experiment he is making with double walled hives made of pine lath, with the space filled with dry wheat chaff. Now our friends should bear in mind that the beneficial results from straw hives are as much dependent on the facility with which straw *dries out* as its property of absorbing moisture; and in order to dry out quickly it must not exceed say an inch and a half or two inches in thickness. Mr Muth of Cincinnati has just sent us a straw mat that is nicer, more tidy and compact than any thing we supposed could be made, and which will we think be excellent. It is stiff enough to make a whole simplicity hive in fact, and were we not afraid exposure to summer weather would induce decay too soon we should seriously consider them for hives the year round. They would have one *very valuable* quality, viz: lightness, and when we ascertain the cost of the article we will consider straw hives. Even for indoor wintering they would be quite desirable under circumstances as follows:

Several quite cold days reduced the temperature in our Bee-house to about 32 degrees, a sudden change with rain raised the atmosphere outside to 50 or more, and the stream of warm damp air coming in the ventilator was condensed in dew all over the hives, wall, etc., and even the quilts felt damp. Now under such circumstances straw hives would be much the most comfortable.

Dec 10th, the following has just come to hand:

I am very glad my straw mats found your approbation, and I supposed it would. I shall not have time enough to make mats for sale this winter, but Mr. M. Nevins, of Cheviot, O., will always have plenty on hand, and leave a lot at my store ready for shipment. He will sell them at $4.50 a doz.

Any body wishing straw mats may address myself or M. Nevins, Cheviot, Hamilton Co., O.

I have imported from Germany, vetch and summer rape seed. Vetch—in German. *Wicke*—affords excellent food for bees, and is besides, good food for horses and cattle. It is sown like rape, and about the same time, and grows like peas, with flowers in all colors. Rape we all know already. It takes 50 lbs. vetch seed and 4 lbs. of rape seed to sow an acre, at least, so I am informed by my German correspondent.

I can sell rape seed at 35c. per lb., and vetch seed at 20c. per lb.; or if sent by mail at an advance on the above rate of 5c. per lb.

C. F. MUTH,
Cincinnati, O.

The mats at the price would be rather expensive for making the sides of hives, but will well repay expense, to be used on top for outdoor wintering. As to whether they would be beneficial where bees are housed, we are unprepared to say. As the expense is but a trifle more than wire cloth, it would certainly be a good idea to try them if they can be arranged readily so as to confine the bees.

We certainly must have some *vetches* next season. The "flowers in all colors," captivate our fancy in anticipation already.

DEAR GLEANINGS:—The two pieces of comb that I got, I positively think had no larvæ, only eggs and a few bees just biting the caps open. I had 19 cells reared, 14 I could cut out, 4 destroyed. *Ten good queens for fifty cents.* Mr. Crall built a bee-house and I got my bees in it too; we have 92 colonies in it and it is only a little more than half full, the house is 12x16 feet, wall 10 inches thick. We put our bees in Nov. 13th. They appear all right, nice and quiet.

S. H. MILLER,
Ashland, O.

Is it not possible that those same hatching bees kept the eggs warm, and thus contributed to the unusual success of friend M? See page 79, Vol. 1.

I am a beginner in Bee Culture; I have read "Langstroth on the Honey Bee," "Mysteries of Bee Keeping," by Quinby, and one volume of the *American Bee Journal*. I am a subscriber for the A. B. J. I commenced last spring with six stands, two Italian and four Black ones, three of them were very weak; they swarmed out after they were set on their summer stand. I have raised my own Queens and Italianized all my bees. I have now twenty-two strong stands, and they all have honey enough to winter. I am going to follow Bee-Keeping, and have read all of "*Novice's*" writing for a year and am interested.

MRS. D. M. HALL, Linn Center,
Rock County, Wis.

We are particularly pleased with the above report, principally because it comes from a married woman; not that we have less sympathy for the Misses, but that 'tis too often the case, the former have too many cares to really enjoy Bee Culture or anything else. We opine many of the veterans would find it a task to make a better summer's work with the same start than has our friend, Mrs. H.; will she please report again next season?

WINTERING.

FRIEND NOVICE:—GLEANINGS for August is at hand, and if you could have seen the smile of satisfaction with which its arrival was greeted, you would have been repaid in part, at least, for the disagreeable things some of the patent right men say about you for pitching into them.

On this subject I would only say; "Keep on in well doing," and "give 'em fits."

I cannot, however, subscribe to all the teachings contained in GLEANINGS. For instance: I do not believe it will *pay* a majority of our bee-keepers to extract the honey and try to winter their bees on syrup, in order to escape dysentery, for I believe the severity of the winter had more to do with the loss of bees in this section at least, than the quality of their honey had; and in proof of this I will give you a few facts that occurred in this neighborhood.

A neighbor living half a mile south of here had eight swarms that he undertook to winter in a cold shed, and lost six of them by dysentery. Another living half a mile west wintered his on their summer stands, and lost all he had by the same disease. A friend living one-fourth of a mile east brought his bees, consisting of four swarms, and put them in my bee-house. One of them, a late swarm, died of starvation. The other three were in splendid condition when he took them away, about the first of March; but after that date he lost two of them, having no warm place in which to put them during the severe cold that occurred in March. Another friend living 5 or 6 miles west undertook to winter his bees, consisting of 38 swarms, out doors. He had lost 7 up to Jan. 1st.; and then came and told me that a number of the remaining stocks were so reduced that he thought they could not live until spring, and asked me what to do with them. I advised him to put them in his cellar. He did so, and now tells me he only lost one stock after putting them in the cellar, and he now thinks that perhaps the bees were nearly all dead in that before they were carried in.

I put 88 swarms in the house to winter. Three of these consisted of bees taken out of my nucleus hives. One of the three was put in as an experiment, being queenless; and the other two had young queens that had not laid any eggs when winter set in, and I do not know that they ever did. I lost the above three, and one of my regular swarms by some unknown cause, probably old age, as the bees from the nucleus hives were nearly all old; and two swarms by starvation, leaving from 15 to 30 lbs. of honey; the bees having clustered at one side of the hive, their stores being at the other.

My bees were put on their summer stands Feb. 19th, but when the weather turned cold all the weakest stocks were put back in the house again, and remained there until we had pleasant weather. As a consequence, I did not lose a swarm by dysentery, the combs of those that died being as clean as they were in the fall.

You will please notice that in the above case, the bees that were lost had been kept near to and almost all around me, so that their honey could differ but little in quality from what my bees had, and if it does not indicate that cold was the main cause of the losses bee-keepers sustained; I shall have to conclude that straws do not always show which way the wind blows.

JAMES BOLIN, West Lodi, O.

Thanks, friend B., you have given us an excellent proof of the advantage of a good frost-proof repository, and as Mr. Quinby says: (see notice of his article,) Cold must be *one* part of the trouble, as bees do not die thus in summer.

Now we should be very sorry indeed to have our friends think we were so firmly astride of our "sugar" hobby that we were incapable of accepting proper proof that we were in error. 'Tis not the winters alone that have produced the trouble, we believe all admit, and if it shall be found necessary to combine the sugar diet with careful housing, providing we can thus get through the winter safely, we think few will complain. We have not personally made the experiment of out door wintering with sugar stores, but a neighbor has, and the difference was too marked to admit a doubt of which diet was healthiest.

OUR,
"Day before going to Press,"
Corner.

Questions not too lengthy, may be answered through this department even if not received until within two days, of the first of the month ; and in two days more, nothing preventing, you may have your paper containing the reply. If our friends would use a separate piece of paper for this, and in fact for each of the departments, and write on one side only t'would be quite a favor,but if it's too much trouble, don't do it, for we want to hear from you any way·

DECEMBER 29TH, 1873.

Mr Muth informs us Honey Jars will be somewhat less for next season, as per his advertisement which see.

Our bees are to-day, Dec. 27th, as quiet and healthy as we could desire, but the weather has seldom been colder than freezing for the last month.

Annals of Bee Culture has not yet made its appearance, although it was advertised to be out about the first of Dec.

If friend Adair would succeed with his Quarterly he should be more prompt than he has been with the Annals heretofore.

The *American Bee Journal* of late does not reach us until near the middle of the month, and *Mrs. Tupper's* not until about the 25th although she proposes to be on hand by the 15th, *The Magazine* has we believe, been generally on hand a day or two before the first of the month. Cannot we all strive in a friendly way to see who will be most punctual?

Probably none of our readers have seen an urchin more pleased during the hollidays, than is Novice at present, who is rejoicing in the posession of a new Printing Office ordered expressly to print our little Journal.

Of course the "Windmill" had to be "harnessed" and brought into subjection, which has been accomplished perfectly, only that 'twill go too fast at times for his untrained hands, but with the assistance of Miss Maud or Master Ernest, to remove the papers from the Press and pile them, he gets along very well. As he must of course try his hand too, at type setting— in fact he is enjoying himself hugely at this very minute in setting up this very item— we trust everything hereafter, will appear in "apple pie" order. [He has already made "*pi*" among the types to his full satisfaction.]

"P. G" says, "beware of making too great calculations on a fair specimen of typography, for the Journal even under Novice's supervision may be a failure in that respect ;" to which he adds, we may assure our friends if 'tis *not* well done we at least *did our very best to have it so.*

Since the above we have printed all but the cover and perhaps should make an apology for using type for heads of Departments, that we should not have used had we not been repeatedly disappointed in getting the proper kind in time. Also, should some of our friends by chance receive a No. with the print slightly askew, recollect it was probably occasioned by a sudden acceleration of the speed of the Wind-mill, too great for Novice's inexperience in feeding the press. If notified we will furnish a good copy in place of all such.

NOVICE will you be kind enough to tell us how to *clean* quilts—ours are stuck up with propolis—some of them are about as stiff as a board,—you will do us a favor by enlightening us on this point.
J. Oatman & Co., Dundee, Ills.

We really don't know of a cheaper way than to put on a new cover of cotton cloth. Benzine it is true will dissolve the gum, but we have found it rather unsatisfactory to wash them. Cannot some use be made of propolis (like bees-wax) that it may be made a marketable commodity? The quilts are not apt to kill bees even if quite stiff, and we use them two or three seasons without much trouble.

1st.—Will it do to store honey in wine or brandy casks, (we can buy such when it would be very difficult to get them made on purpose)?

2nd.—Do you think the young bees or queens would not be apt to make mistakes in an Apiary on your plan, supposing the grape vines were omitted?

3rd.—I expect to have all my bees—31 stocks—in "Simplicity hives" next spring. Would it do to pour a half pound of feed on the cluster of bees at once? Wouldn't it make a muss?

4th.—We are told to make our bees fill the apartment given them at all times. Suppose that on examining a hive in spring, the bees are found to occupy about three combs, all of which contain brood, but very little honey, that being in the other combs at each side. How are we to confine the bees to those three combs, and avoid the evil of cutting off their supply of honey and pollen? Respectfully, yours,

G. C. MILLER, Mount Hanley, Nova Scotia.

1st.—We have always used wine and brandy casks for shipping small quantities of honey, and found no trouble. They can be purchased cheaply, of almost any size at the drug stores, and seem to be just what is needed.

2nd.—We think the omission of the grape vines would make no difference whatever; we have a number of hives in front of the house, entirely without the vines.

3rd.—A half pound, unless very thick, and the colony very strong, would be sure to run out and make a muss. Try less.

4th.—You will find no such trouble in practice we think. Allow them honey and pollen sufficient at all events.

Our readers may have observed an advertisement of a plan for securing straight combs, in some of our Bee Journals, during the past season, by our friend whose name appears below. The plan seems to be somewhat a combination of Dadant's Comb Guide Press, and directions given in the North American Bee Journal some time ago. We believe Mr. W. has sold a number of the Directions, but we think we have convinced him of the impractibility of his method, for one of our subscribers who had purchased it, offered to send it to us and in fact we know of no reason why information should not be freely communicated if valuable.

Mr. W. now sends it to us for publication, and we hope all credit will be accorded him, where it is found to be valuable.

We have seen a similar device used, but found our thin pine strips to answer so well, and so much less trouble *to us*, to make and put in, that we have used nothing else. It should be remembered that we have always had our [illegible] built between two others, and under such circumstances we have never had them leave the comb guide.

COMB GUIDE CONSTRUCTOR.

An Easy Way to Secure Straight Combs within the Frame.

Every Bee-keeper who keeps bees on the improved system of management, undoubtedly knows the great advantage in having the combs built straight in the frame. Without this advantage no one can make much improvement in bee culture. There are different methods of securing straight combs, but nearly all have some disadvantages. For neatness, cheapness, and simplicity, I claim the following plan has no equal:

DIRECTIONS.

First. Make a straight edge of wood ⅜ inch thick by ⅝ inch wide, and ¼ inch shorter than the inside of top bar of frame.

Second. Ingredients—Take one part Resin, nine parts Beeswax. Heat over a slow fire until thoroughly melted.

Third. Have a wet rag or sponge in readiness, moisten the edge, turn the frame upside down, then lay the straight edge on the frame where the wax guide is to be formed. Then, with a teaspoon, pour a little of the melted wax on the upper end, (the frame being inclined at an angle of 45 degrees) and let it run down along the straight edge. When the wax has become hard, remove straight edge lengthwise to loosen it. Moisten the straight-edge frequently, and a good and reliable wax comb guide will be formed, equal to the best, which must be kept a profound secret.

E. J. Worst, New Pittsburgh, O.

P. S.—The melted wax must be kept warm, not *hot*. If the wax has the right degree of heat, it will seldom adhere to the straight-edge. If it chance to, scrape it off with a knife and remoisten, &c.

We are happy to announce that a neighbor of ours is making preparations to print all kinds of gummed labels by the quantity.

Orders for Honey Labels may be sent to us and the labels will be returned by mail post paid. Prices are, for Labels in two colors, with name and residence of Apiarist, and name of source from which the honey was gathered.

1,000	$2.75
500	1.90
250	1.45

No orders filled for less than the latter price.

$1.00 Queens.

IN this department we propose giving gratuitously the names of those who will undertake to rear queens for $1 each under the conditions we have made. While we cannot undertake to be responsible for all the names given, we shall endeavor to insert none who are not in the habit of fulfilling all agreements.

And if nothing interferes, I shall sell warranted pure Italian Queens for one dollar next season.

John L. Davis,
Holt, Mich.

We think if Mr. D. or any other Queen rearer will warrant all $1.00 Queens to be strictly the progeny of carefully tested mothers 'tis all that we should expect of them. Purchasers will then stand the same chance of getting fine queens that those rearing them do, and the latter class will not seriously injure their Apiaries by selling the best continually and keeping the poorest, for even should we receive $10 or more each, 'twould be a losing business to select the best we had for every customer who was willing to pay for such.

In Nov. No. page 85, you ask who will assist, etc. I will, and will send them by return mail after the season is fairly opened. I have been selling queens for $1 each for three years. Choice queens I sell for $2, and tested for $5; it requires the use of a swarm for thirty days to test a queen, hence it is cheaper to sell for $1 or $2. I agree with you that orders should be filled by return mail. I have never failed to do so in but two cases, and they were out of season. This is a good thing in selling $1 queens.

W. Hosmer,
Janesville, Minn.

Glad of your assistance Mr. H. If you can rear queens at the rate you do honey, we shall not need to worry for fear orders can't be filled.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound Jars, per gross,	$ 6.50
Two " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross,	.90
Three " " "	.65
1 qt. Self-Sealing Dictator Fruit Jars, per gross,	17.00
" Mason's patent, " "	19.00

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

For further particulars, Address,

CHAS. F. MUTH,
1tf Cincinnati, O.

AMERICAN BEE JOURNAL.—Established by the late Samuel Wagner, at Washington, D. C. Now published at Chicago, W. F. Clarke, Editor and Proprietor. Subscription price, $2 per year, in advance. Sample numbers sent on application.

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to NATIONAL BEE JOURNAL, now published and edited by

ELLEN S. TUPPER, Des Moines, Iowa.

Liberal terms to Agents. Specimen number free.

DO **TRY IT 3 Months for 10 Cents;** or with $3 Chromo for 50 cents; or 6 months with "The Flowers of Paradise," a first-class $6 Chromo, 15½x21 inches, for $1. The National Agriculturist and Bee Journal is a 16-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75.** Send now for samples, and **Liberal Terms to Agents free.** H. A. KING & Co., 14 Murray St., N. Y. 1w2

The Best Paper! Try It!!

The **Scientific American** is the cheapest and best illustrated weekly paper published. Every number contains from 10 to 15 original engravings of new machinery, novel inventions, Bridges, Engineering works, Architecture, improved Farm Implements, and every new discovery in Chemistry. A year's numbers contain 832 pages and several hundred engravings. Thousands of volumes are preserved for reference and binding. The practical receipts are well worth ten times the subscription price. Terms, $3 a year by mail. Specimens sent free. May be had of all News Dealers.

PATENTS obtained on the best terms, Models of new inventions and sketches examined, and advice free. All patents are published in the Scientific American the week they issue. Send for Pamphlets, 110 pages, containing laws and full directions for obtaining Patents.

Address for the Paper, or concerning Patents, MUNN & CO., 37 Park Row, N. Y. Branch Office, cor. F and 7th Sts., Washington, D. C. 1tf

Vol. II

GLEANINGS IN BEE CULTURE.

No. 2

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,
BY A. I. ROOT & CO.

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to Conduct an Apiary.....15
Wintering.....15
Giving bees a "fly" in winter.....15
Guilty or not Guilty?.....16
About making good Hives.....16
Rustic Bee Houses.....17
Painting Bee House floor etc.....17
Editorial.....18
Review of the Bee Journals.....23
Shall we Clip Queens Wings?.....19
Humbugs and Swindles.....20
Temperature.....18
Candy for Bees.....18
Dry Sugar Feeding.....18
Bees Wings etc.....19

Page.
Artificial Fertilization.....20
Can we agree on a STANDARD FRAME.....20
Heads of Grain.....21
Photo's of Apiaries.....21
Concerning Problem No. 19.....22
Can we agree on a STANDARD HIVE.....23
"Latest Intelligence" Corner.....32
Bee Journals and Punctuality.....23
About *Us*.....23
Quilts and Propolis.....23
$1.00 Queens.....23
Honey Column.....24
"Strained honey".....24
Who will rear Queens in the South.....24
Single story versus Two story.....24

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpareil space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound square Jars, per gross.	$8.50
Two " " " "	9.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross	.75
The same with address printed to order, per 100,	5.00
1 qt. self-sealing Mason's Fruit Jars, per gross	19.00
Labels for above, " "	.65
The same with printed address, per 100	4.25

CHOICE NEW ALSIKE CLOVER SEED.

One bushel (60 lbs.) at	$20.00
½ " "	11.00
¼ " "	5.00
One pound, "	.45

Has arrived and is for sale. Also

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

For further particulars, Address,

CHAS. F. MUTH,
1tf Cincinnati, O.

SALE OF 400 COLONIES OF ITALIAN HONEY BEES.

Having accepted the office of cashier of the Farmers & Merchants Bank of Jefferson, which was lately organized in this place, I will be unable to care for all the [illegible] stocks of honey-bees I have now on hand; I will therefore sell 400 of them. These bees are all pure Italians, and will be sold as follows:

Single colonies	$13.00
10—25 " per colony	12.00
25—50 " or more "	11.50

These bees will be delivered free of charges at the express station in Jefferson, and safe arrival at the nearest express station of the purchaser guaranteed.

All these stocks of bees are in an 8 frame Langstroth movable comb hive, are in good condition and have honey enough to last them to May 15th, or longer.

Terms cash in advance.

ADAM GRIMM,
2-4 Jan. 20th, 1874. Jefferson, Wis.

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

TAKE
THE PRAIRIE FARMER
FOR 1874.

IT WILL AIM:

TO help on the great work of organizing the farmers, by means of the Patrons of Husbandry and Farmers' Clubs.

TO lead the van in the contest of the people with railroad and other monopolies.

TO treat of the most approved practices of agricultural and horticultural pursuits.

TO set forth the merits of the best breeds of domestic animals, and to elucidate the principles of correct breeding.

TO furnish the latest and most important industrial news, at home and abroad.

TO discuss the events and questions of the day, without fear or favor.

TO further the work of agricultural and horticultural societies.

TO advocate industrial education, in the correct sense of the term.

TO provide information upon the public domain, Western soils, climate, &c.

TO answer inquiries on all manner of subjects which come within its sphere.

TO give, each week, full and reliable market, crop and weather reports,

TO present the family with choice and interesting literature.

TO amuse and instruct the young folks.

TO be, in a word, an indispensable and unexceptionable farm and fireside companion, in every respect.

TERMS.—Single copy, $2.50 per annum, in advance Two copies, to one old subscriber and one new, or two new, ordered at same time, $4.00. Liberal reduction to clubs. Three months on trial, 50 cents. Sample number, free.

☞ **Liberal Cash Commissions to Agents.**

☞ **Great Inducements to Farmers' Clubs and Granges.**

Full information and complete canvassing outfit furnished FREE, on application to

THE PRAIRIE FARMER COMPANY,
Chicago, Illinois.

DISSOLUTION AND REMOVAL.

The firm of BALDWIN BROS. is dissolved by mutual consent, the same to date from Nov. 1st, 1873.

L. W. BALDWIN,
A. A. BALDWIN,
P. BALDWIN.

The subscriber, having removed to Missouri, will continue to breed choice Italian Bees and Queens from the best stock that can be procured. Purity and safe arrival guaranteed. No circulars.

Prices:—Single Tested Queens, $3; Two for $5. Six or more, $2 each. Address L. W. BALDWIN,
Wellsville, Montgomery Co., Mo.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address

DR. J. P. H. BROWN, Augusta, Ga.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases of receipt of money—for any purpose whatever, by return mail. Volume I. for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

[illegible] take the [illegible] Volume One [illegible] entire Fundamental Principles and [illegible]

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY.

Vol. II. FEBRUARY 1, 1874. No. II

HOW TO CONDUCT AN APIARY.

No. 2.

We are happy to add that up to this date, Jan. 24th, no reports of disease have been received, but as it made its appearance last winter in many places only after this date, we cannot be certain as yet in regard to the matter. Our winter has been as yet quite a mild one in this locality there having been but three or four days when the temperature approached zero. As our colonies are unusually weak this winter our Bee house has not kept up the temperature as well as formerly, in fact we found it as low as 30° on one occasion and before we could start a fire in our stove and warm the room up, one of our weakest colonies had died.

An examination showed clean combs and no trace of disease, but the cluster had dwindled down until not half a handful of bees were left when the low temperature finished them; they perished in the midst of clean sealed stores.

Messrs. Shaw & Son of Chatham, this Co., also report having lost quite a number under the same circumstances and now unite with us in pronouncing all attempts to winter Nuclei, but a "vexatious bother".

We discovered that during very cold weather the lower ventilator could be closed entirely without bad results, and as this kept the room much warmer we consider it best, during very cold weather. Our friend Shane, a few miles distant, gives the same experience and his colonies are many of them quite strong; he also covered the ventilator with a piece of cloth to make it perfectly tight.

With the loss of the "cider fed" colony mentioned on another page, our number now counts only 55 instead of 57.

There seems to be a tendency to an opinion, much favored by both Mrs. Tupper and Mr. Quinby, that moving stocks during extreme cold weather is very injurious, and is sufficient to produce dysentery. Such may be the case with bees fed on natural stores, but 'tis most assuredly not the case with those sugar fed, for ours the greater part of them were re-housed the last of Feb., last winter when the temperature was 4° below zero; see GLEANINGS for March, page 20. No bad results followed and no trace of dysentery other than that of some weak nuclei that were diseased before in consequence of being fed late and being too weak to seal it up. The Quinby hive with all natural stores and, that had not been disturbed in any way at all, were badly affected and soon died although strong in numbers.

If Mr. Q. would give the address instead of just the county and state, we might write to Mr. Elwood and ascertain whether those colonies he mentions as having the disease so badly, were fed with the syrup early enough in the season to give them a chance to seal it up. Even should his experiment have given no result in favor of sugar stores it only proves that sugar is not *always* a preventive; the large amount of testimony given during the past three seasons pointing clearly in favor of the sugar, should also be respected.

We had supposed plain cases plenty, where it had appeared in its worst form when the bees were housed in the warmest quarters, but we shall be agreeably surprised if we find we have been mistaken. In regard to fastening the bees in the hives by wire cloth in winter as we have described, we are at present decidedly pleased with the plan. During warm spells many go out in the porticos that fail to get back, but with the space below the frames as in the Simplcity hives we have no such trouble.

I put my bees into winter quarters about the 10th of November. I think they are in "splendid" condition. If the weather is suitable how soon would you advise to set them out for a "*fly*"? How warm should the weather be in order to do it with safety?

S. F. NEWMAN, Norwalk, Ohio.

We would not advise putting them out at all for a "fly" unless they seem uneasy and impatient of confinement, and not even then unless some very fine weather appears in Jan. or Feb. The air should be warm enough for a bee to take wing again, even should it alight in the shade, or many may be lost in their anxiety to fly after being shut in so long, not being able to regain the hive. If stores are wholesome and ventilation proper they can endure confinement for four months or more as has often been proven. Warm weather in winter is so apt to change suddenly for the reverse that we must consider taking them out for a "fly" a risky operation at any time, although should several quite warm days and nights occur in succession 'twould without doubt be a gain to give them a taste of the open air and thus encourage brood-rearing a little.

Taking them out by moonlight in the evening would be an excellent way, could we always be *sure* that the ensuing day would be a pleasant one, thus giving them time to quiet down before morning, and obviating the danger of their rushing out in a demoralized body, without taking the usual points of their home. Be sure to give each one their accustomed stand for they will remember it under such circumstances four months or more.

GUILTY OR NOT GUILTY?

MESSRS. A. I. ROOT & CO:—THE last No. of GLEANINGS was duly received, and after reviewing the Vol. I think it about the best investment in the way of bees I have recently made, as it seems like a complete casket of valuable information to every Apiarian.

In the next Vol. please do not alter the size of pages, so that one Vol. will bind with another, nor cut the leaves, but leave that for the binder to do. I like the generous margin as it looks well and leaves a chance for notes etc.

The material for six hives came duly to hand. Freight, $2.70. As you invite friendly criticism we will try our hand if it is a little "onpleasant," and as Shakspeare hath it "I will nothing extenuate or set down ought in malice."—In your circular (5th ed.) you remark "and if no better lumber is used than barn boards (with no loose knots)" and on page 68 of GLEANINGS "There is nothing like system and precision etc." Now I must conclude that you did not make the hives as they embrace none of these principles, so far from it in fact that it will be a tight squeeze to get five out of the six, as two of the sides have each a very large knot, one quite loose, 2½ by 3½ inches, the other larger and very rotten, and which if dug out would require a piece of putty the size of your little finger to fill it. One of the tops is cracked so that I will not use it, and if the material is bad the workmanship is quite in keeping. I have owned power saws (alas! those days are gone,) and have done some sawing—making clock cases etc. but if I ever did such work as that, God forgive me as I would not forgive myself. The rabbets are not deep enough for the sides into over 1-16 inch, and are thinner at the bottom than the top, and none of the top boards fit like "clock work" except at the ends—at the side they lack from ⅛ to 3-16 of touching the side of the cap, and one of the end-pieces is too short, while another is to narrow. In fact altogether they are the poorest lot of hives of any pretensions I have ever seen. Just say nothing until you have seen some more of the same man's work, then judge for yourself how far I may be correct here.

Now for the other side, I like the idea first rate; and have put them together with screws. If I make others I shall put them together on a miter so that no end wood can be seen. I shall use those I have, but instead of using them two stories, will take a side from each of two hives and put the two hives together so as to form one horizontally, fastening them together with the same screws and a piece of board just wide enough to fill the rabbets. Now move the combs into the center with a division board each side, and place an empty frame or comb inside of outside comb, when the frame is filled put it outside with an empty one inside, and so on till your hive is filled, if your stock is an ambitious one and will do it as some have done.

If I should require some bees in spring or summer could you send me one hive containing four small stocks of Italians, say two frames each, queens first rate and *combs ditto?* Hives of the simplicity persuasion. If so at what price?

Hoping our relations through next year may be as pleasant and profitable as the one just closing, and wishing every success,

I am yours truly,
WM. H. KIRK,
Dec. 23rd, 1873. Waterbury, Conn.

The double Simplicity Hives have reached me in good order and quick time, and at an expense I believe of only $1.50, I have them setting in the Post Office and have explained their mysteries to hundreds of people. All admire their Simplicity and evident usefulness, I shall manufacture them in the spring—will have buzz saw in operation shortly.

Respectfully,
W. C. GRIER, Lamar, Mo.

DEAR NOVICE: [all but the Novice] I did not intimate that your hive was rough, expecting it to meet the public eye; neither for much of a criticism, it was good enough—but being a cabinet maker it is easy for me to make work rather smooth. Go on in exposing rascality sharply, but at the same time with a kind heart. Yours for MILK and HONEY,
STEPHEN YOUNG, Mechanicsville, Iowa.

Now 'twould be quite a "comfortable" way of getting along to pretend there was "another man" who made those six hives, but on the whole we think we will plead "guilty" and frankly acknowledge we made them ourselves, and are alone responsible. We may add in extenuation and by way of apology that the hives sent Mr. K. were the very last of a lot of about 200, and that as 'twas at a season of the year when they were little called for, we had not even lumber on hand for more, still we supposed we sent him material for six serviceable hives. In regard to the knots we would say that we always expect every hive to be well painted before being used, and this will fasten loose knots as we have had proof in our own apiary, the Averill Chemical paint we have mentioned being peculiarly adapted for this purpose. If our friend will pardon the suggestion, we will suggest that a knot-hole seems to strike the fancy of the bees as being particularly nice for an entrance, the rough rotten edges affording them a secure and natural foothold. We have one such hive and 'tis amusing to see them swing out and in "their knot-hole" as if 'twas endeared to them by some such ties as the "old oaken bucket" etc. is to us. We have thought of mentioning the matter before, but feared some one would be having them *all patented.*

Novice once remarked in answer to P. G's. remonstances that we would always save the knotty pieces for home use, but it must be that we by mistake included friend K. in our "home circle" which honor he doubtless would respectfully decline. In regard to tops we use "checked" or slightly split ones for bottom boards as they answer quite as well, and we supposed the six hives would be used two story so that at least three *perfect* tops could be found. We cannot imagine how an end-piece could be short unless an old one got mixed in from some hives made in our first experiments, for whatever other faults there may be, we certainly can saw the length of all boards alike and *do* do it. In regard to the width 'tis more difficult, for unless we can get wood *perfectly seasoned*, and any wood-worker knows how difficult this is, the boards will shrink unequally, but so far as the body of the hive is concerned this makes little difference, nor can we see that the cover is materially injured should it shrink so much as to lack ⅛ inch on each side; we are using many such and have never yet known a drop of water to get inside, which is more than we can say for any other kind of hive we ever used. We have never claimed our work to be first class (see Feb. No. page 13. Vol. 1st.) but we can appreciate good work we assure you, and the Connecticut mechanics who make clock cases would be just the chaps to make hives as they should be, and now Mr. K. cannot you induce some one near you to take the job? 'Tis true that just as much honey might be secured by using hives made as we furnish them, but we *should* like hives ourselves made as nice as a "work-box."

As an evidence of the differences of opinion we give an extract from friend Grier's letter in regard to hives out of the same lot and sent about the same time only we put them together; perhaps we have a peculiar skill in making good hives from poor materials. Before closing the subject we would say we have asked friend K. to send in his bill for allowances, and we hereby extend the same invitation to our whole circle of customers. If we have been remiss don't be backward in letting us know.

The plan of making single hives double width is ingenious, but how about the covers? We have often thought of it but could not get over the top and bottom difficulty. As screws would be much more expensive and the trouble of taking a hive down after it has been once properly set up is such we hardly think we would use screws; besides the cross nailing holds them "forever" especially if the boards are put the proper side outward as we have directed. We feel sure you will not like hives made on a mitre, we have tried such, they are not as strong at the corners and are unwieldy to nail.

So many have applied to us for bees that we dare not promise any at any price. Four small colonies can be put in a Simplicity hive without trouble; we have reared four queens thus, and had them all laying nicely with an entrance on each of the four sides. [Don't you see how handy the *knot-holes* come again?]

Mr. K. we shall have to thank you many times for your suggestions. In regard to cutting the leaves of GLEANINGS we think by far the greater number of our readers would prefer them so; and we regret that the margin is not as great as we had intended to have it. As our paper is all purchased for this year we shall have to wait until another season.

◆

[For Gleanings.]

RUSTIC BEE HOUSES.

NOVICE:—Thanks for GLEANINGS.

I have constructed a bee-house on this plan, I first dug an excavation two feet deep and 10 by 20 feet square, built a frame in it lathed it over and covered it with straw two feet deep over the whole of the building, I then covered it with a tight board roof. The ground which I shoveled out of the cellar I packed against the side of the buiding, starting with a base of 5 feet, and tapering to 2 feet at the eaves, I made a floor of dry saw-dust four inches thick and put in 40 colonies of bees at a little elevation above the floor. I now have a house that will never get damp from the perspiration of the bees, the straw roof being a perfect ventilator.

Bees are wintering well up to this time, shut in the hives securely at the bottom, but not air tight, and with wire cloth over the frames to keep them from crawling out when the temperature gets too high. In cold weather I leave the cloth quilts on the frames, and in warm weather I remove them. How is *that* for high, Novice?

E. J. WORST, New Pittsburgh. O.

Tip top for high, especially if you *do* succeed in wintering this time. We are the more obliged as you have assisted us in replying to the following, which was in type, with our reply when yours was received.

Bee-keeping in this section has about played out. More than half of those who have been in the habit of keeping a few stocks have become discouraged, having lost from one third to *all* of their bees. I have been considerably disappointed for the last two seasons in not having any surplus honey, although I have lost but a few stocks. I winter on their summer stands and the bees get so weak by spring that the honey season is over before the bees are strong enough to improve it. As I am not able to build a bee house such as you describe, I would like your opinion of a house made of *wild hay*, of which I have quite a quantity.

Say, set stakes to form a room ten feet square, board up the outside (not tight) with fence boards, then set another row of stakes about three feet outside of the first row, and fill in between with hay. Lay poles on top, then stack hay on them making a regular hay stack with a room inside shelved off for holding hives, of course make an entrance three ft. by six with double doors. Would it need a floor? and would the spaces between the fence boards on the sides, and the poles on top be ventilation enough? or ought there to be ventilators put in top and bottom?

I could build such a house with but very little expense. An opinion from NOVICE would be regarded with great favor by

SAMUEL. C. WARE, Towanda, Ill.

Such a house will answer every purpose we feel sure and we think no ventilators will be needed. Hay enough should be used to make it perfectly frost proof and we think 'twould be longer in warming through, late in the spring than houses of sawdust walls. Such plans have been in use in our vicinity for several seasons and seem to answer every purpose, and we know of no objection unless it be a general untidiness, however this might be remedied to a great extent. We would advise throwing up the earth in the centre and making a ditch all around to keep off surface water and having about six inches of saw dust on the ground for a floor.

Perhaps a window or windows could be added and the whole made so as to answer very well for a honey house in summer also; 'twould be nice and cool, the odor of the grass would be quite agreeable, and as almost every one can get swamp grass for cutting, perhaps this rustic Bee House in conjunction with friends Butler's and Muth's straw hives may be the thing after all.

Who will build the nicest one, i. e. to be all "home made"?

P. S.—Mrs. N. says, "but the hay seed will be rattling down into your honey, and then suppose you should spill a barrel full or so on your saw dust floor what would that do, and would not rats and mice work in the straw etc.?"

And that reminds us of a little incident to wit: We think 'twas during a hot Sabbath in August that Novice looked into the Bee House and found a brilliant mirror of clover honey covering the painted floor.

Now P. G. *did* scold because he said it made no difference if the bungs of the barrels were not left uppermost, and also that there was no need of driving them in so "awful" tight, but better still she insisted on having the floor all carefully washed up nice, the Saturday previous.

Well, as we said, there was the honey; the hot weather had so expanded it that it had pushed the bung out and nearly ¼ of a barrel was on the floor, if the barrel had been rolled over more, more would have got out. Novice of course "sang out" for Mrs. N. and as all the rest were at church or somewhere, "Blue Eyes" had to go too; with honey knives and spoons a terrible dipping was kept up which "baby" enjoyed hugely until the close hot room (bees would "help" if the doors were opened) began to seem monotonous, but tunnels, spoons and ladles and a series of chirrups from "papa" lengthened out her baby patience until the last bit was scraped up and then didn't we straiten up our tired backs; that is, Mrs. N. did, *after the floor was washed clean once more*, Novice amusing "Blue Eyes" with some honey and a feather meanwhile.

Well, we got it all, except about a pound which was [illegible] into our "coffee pot" that we keep to hold "[illegible] honey for feeding" and the same barrel was recently sold for 20c. per lb. and was pronounced "tip top."

MORAL: It will pay to have a tight floor to your bee house and to keep it well painted; also drive the bungs in tightly and if convenient leave them in very hot weather uppermost, and lastly never disagree with the "women folks" if they do get fidgety if the floor is not always kept "just so clean".

Gleanings in Bee Culture,
Published Monthly,
A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.
MEDINA, OHIO.
Terms: 75c. Per Annum.
For Club Rates see Second Page.
MEDINA, FEB. 1, 1874.

PLEASE excuse small type; 'tis our old complaint, we have more matter, than room.

WE find the *Prairie Farmer* one of the best, among our Agricultural Exchanges, its appearance is bright and attractive, and its articles are from our real live business men, aye and women too, and what pleases us more is that their writers have a definite place of existence instead of being dropped loose in a whole county as is so much the fashion of late.

◆

WE cannot say that subscribers "pour" in, as some of the papers do, yet we are kept sufficiently busy to render it possible that a mistake may creep in now and then. Whenever such be the case drop us a postal card and dont be bashful in stating just where we've "put our foot in it." We certainly "mean well" as the boy said of his dog when he bit a piece out of the man's leg.

◆

OUR bees "scold" when the temperature of their room gets below 35°, when warmed up to 40° or 45° they are as still as if dead nearly, but when it is increased to 50, or 55 they begin to emit quick sounds at intervals, that seem to us to be interrogatories, as much as to say, "wont it do to let us have a fly?" If the temperature is kept there, they soon get quite uneasy. About 40° seems to us, the most desirable point.

CANDY costs from 25 to 30c. per lb and sugar about 11½ only. By stirring it with a little water, and then baking it in a slow oven until all the water is expelled, we have hard cakes that answer every purpose of candy so far as we know, at a cash outlay of only the price of sugar. Now the above solution of Prob. 1. must be worth at least $5.00 to every bee-keeper but we don't see how we can sell receipts, for they *will* tell their neighbors.

◆

THE "Honey Bee" price 50c. By Aaron Benedict, Bennington, O. is before us.

The paper is cheap, the print bad, and the contents mainly extracts from old numbers of the *A. B. J.* Although published in 1873, we can find no mention at all of the Extractor nor of the recent troubles in wintering. The concluding item is, "Hives should be so constructed that the frames will fit tight in the hive, preventing the space between the sides of the hives and frames, etc." Truly, we fear the Island wheron our friend rears untested queens for $5.00 has shut him out from the rest of mankind, as well as his bees. A veritable Rip Van Winkle, in Bee-culture.

WE would refer the numerous friends who have written us for bees, to the advertisement of Adam Grimm, for even after paying freight his prices are less than we could sell for. The best honey-gatherers we have ever had, were bees from Queens purchased of him.

◆

To such of our Southern readers and others as have their bees flying when this reaches them, we would say, commence giving them dry sugar as soon as they will use it; place it in the sun but out of the wind and get them them to "building up" as fast as possible.

Their rye, oat or barley meal may be given them at the same time and place, and the nearer we can get them to approach their natural activity, the better; the use of the sugar will prevent their straying to sugar-camps etc., but will not prevent their going for the blossoms when they appear. Dampening the sugar will hasten matters but is apt to incite robbing and to call them out in unseasonable weather.

"BEES WINGS" AND SUNDRY OTHER MATTERS.

BY D. L. ADAIR.

MR. ROOT.:—In your notice of the paper I read at the last meeting of our National Society at Louisville, you make an unfair statement when you limit it to "*that bees breathe through their wings*," thus conveying the impression that I located the breathing apparatus and the lungs in the wings. *Bees breathe through Spiracles or pores under the wings*, and I so stated, I further stated that from these the air is led through delicate tubes to every part of the body, even to the tips of the wings, and no naturalist will deny the statement. No organ is specialized as lungs, the bees have no lungs, except those tubes which follow the veins or circulating fluid throughout the whole bee, and the air is brought in contact with the blood through the thin walls of these tubes in every part of the system, just as is the case in the human lungs. Would it not be fairer to publish the whole paper so that your readers could judge for themselves, or at least make a fair statement of what you call "Adairs folly." [By way of parenthesis: Did it ever strike you that calling a man a *fool* was not courtesy? Do you think you can advance Bee-culture by calling hard names? Or do you think your judgment is so infallible that you are justified in calling a man a fool because you differ with him in opinion? If I am in error convince me of it by fair argument but please quit calling names.]

The only argument you use is the statement that one of your best queens, the mother of the colony that gave you 330 pounds of honey had no wings, and she was good for at least two seasons. Now, as you attribute Mrs. Tuppers statements about injuring brood to her "*inexperience*," you will not certainly get mad and go to calling hard names if I apply the word to you, and question your facilities for judging of what a good queen is; for so long as you manage bees as you do, in hives that will not allow a queen to show what she can do, you will certainly be "inexperienced." Until you give the queen a compact brood nest sufficiently large to accomodate her with ample room, at all times, to deposit every egg she can be stimulated to produce you will be "inexperienced." So long as you shift the brood about and mix it up indiscriminately in top and bottom story, you will have your bees continually disorganized, and even a queen that is badly diseased can furnish all the eggs that are required, and you will be "inexperienced;" and you will be "inexperienced" so long as you pass judgment on every "New Idea," that is suggested, before you investigate it.

That Adam Grimm clips his queens wings and gets a paying crop of honey is no reason why Adam Grimm might not do better if he did not so mutilate them and had his bees in hives that would require perfect, vigorous queens, and allow of better management.

I have a letter from one of the best entomologists in the U. S. in which he says:—"*Your argument that the wings of insects serve as lungs is unanswerable. It must injure the bee thus to mutilate it and reduce its strength.*" So says Dr. Packard, Editor of the *American Naturalist*, and author of A Guide to the Study of Insects etc. and Professor in the Academy of Sciences, Salem, Mass. and perhaps there is not a naturalist who is acquainted with the anatomy of the bee that will take any other position.

You emphasize the word "*Practically.*" Now, I quit the barbarous practice of cropping the queens wings, several years ago, because I discovered that they were not so prolific as those with wings. As a rule they will, many of them, live just as long; in fact, one of the oldest queens I ever had, had no wings. She lived until the sixth year but never had a populous colony, and many of her offspring were without wings. On the contrary a queen that lays, up to her full capacity, will not live long. After one full seasons laying she becomes almost worthless. When the definite number of egg germs in her ovaries are exhausted she dies from exhaustion, as does the worker bee when it has expended its vitality in labor, and I think it likely that when we get to understand perfectly, how to manage bees; and when queens are bred up to their full vigor, that a queen will not live longer than a worker. Yours truly,

D. L. ADAIR,

Hawesville, Ky. Jan. 7th, 1874.

We welcome the above as being strait forward and manly with the exception of the remark that we ever considered or thought of calling friend Adair a *fool*, or in fact any one else, or of using any similar term, in all our writing on Bee-culture; nor can we for an instant believe that any of our readers have so understood it. We have considered many theories like the above "sheer folly" and in extreme cases think it best to so pronounce them to prevent if possible the host of *novices* from accepting and acting on assertions easily shown to be grievous errors.

Mr. A. in his present remarks is mild in comparison with the paper referred to; that he started out with established facts, in part at least, and that he is somewhat contradictory, those may see who care to go over the matter.

We declined publishing the paper then, and do now on the ground that very few people indeed are capable of deciding what is truth and what is error in the Microscopic World. And we would also question the propriety of the *Rural New Yorker* and other papers submitting to their readers such an article, when mankind is so prone to take up and disseminate error, most especially the "twaddle" that has passed as true science for years past concerning the "wonderful revelations of the Microscope."

Such of our readers as would know our grounds for calling Adair's paper "folly" we would refer to "Carpenter on the Microscope," pages 570 and 574. We extract in substance as follows, the italics of which are our own:

"The wing of the *bee*, is composed of an extension of the external membranous layer of the body,— over a framework formed by prolongations of the inner horny layer; within which prolongation of the inner horny layer,—trachae are to be found,—around which are found channels, through which blood circulates, during the growth of the wing and a short time after its completion. Each of the nerves of the wing contains a trachae, or air tube,—which branches off from the tracheal system of the body; and it is in a space around the trachea that the blood may be seen to move,—when the hard framework of the nerve itself, is not too opaque. This circulation may be seen readily in the wings of *bees*, while young and growing,—shut up motionless in their cases; for this condition of apparent torpor is one of great activity of the nutritive system;—those organs, especially, which are peculiar to the perfect insect,—being then in a state of rapid growth, and having a vigorous circulation of blood through them; *but this movement soon ceases and the wings dry up.*"

Are we not right in concluding that by the time the queen has reached the age at which she usually lays eggs, she has no further use for her wings than for flight, for their circulatory system has then *dried up* as Carpenter has it, and the clipping them then, affects her about the same as does the cutting of our hair or finger nails.

So much for the Microscope: Now should practical Bee-keepers agree, after trying Queens clipped and unclipped side by side for a number of years, that they could see no difference in fertility, are we not excusable in terming the paper as we did. So far as eminent Naturalists and Entomolgists are concerned we have only to say it will be the worse for *them* if they endorse the paper in question and its winding up especially.

Agasssiz has given us *one* illustration of the "stubborn folly" of some, who stand high before the world, that will not soon be forgotten in Bee-culture. Again should one Apiarist of limited experience in extracting, make a statement directly at variance with one hundred or more who had large experience, and who all agreed in their statements, what term should be applied to such a course?

In both of the above cases much mischief might be done to beginners were not the matter corrected at once.

Who has not seen one of their rousing swarms of bees sailing away to the woods, and stood helplessly thinking they would give their best five dollar bill if just one "little tip" of one of that queens wings was off?

And in latter days, how many novices have wished they only *knew* for certain, whether 'twould hurt the brood to throw all that mass of honey around and among it out, that the queen might further extend her domain?

The truth is we are afraid of Adair; for years back he has made at times such tremenduous jumps at conclusions that we dare not trust him, and in fact true to nature he makes one in his article above before finishing viz:

His queen without wings produced offspring also wingless during the *first generation.* Darwin in his works protests that a million of years would be far too short a time for such and such results, but our friend would have accidents to the mother producing wingless workers in six short years or less? We have all seen wingless workers of course, but an examination of the combs, not the queen, usually solves the difficulty.

In regard to the two story hives and promiscuous changing of the combs, we have no doubt but that our friend is in the right and we heartily thank him for his suggestions. We have more than once noted the disorganization of a colony by spreading combs too fast, and also the shock that was given them when giving them the whole upper story at once, especially if cool weather intervened. Rest assured friend Adair that however severely we may criticise, we shall never forget the valuable hints you have thrown out here and there, and shall certainly never think of calling you the harsh names you accuse us of having used. In concluding we will say that we have a way of measuring a Bee-keeper by the tous of honey he has produced, and number of colonies he can manage successfully. Nothing else will do as a substitute, and we are as well aware as any one else that our place is not very high up on the ladder, but we hope "we're growin'."

Humbugs and Swindles

Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

IT seems at present that our old friend N. C. Mitchell, is most active in this field, and although we have already devoted considerable space toward "helping his projects along," we think it best to "stand by him" still further.

His new field seems to be scattering circulars and asking various P. M's. to assist him in getting "Agents."

We give below, one selected from the bundle, with notes in parentheses from our facetious correspondent who forwarded this; said lot found its way into his hands from the P. M. to whom Mr. M. had written a "pathetic" postal card. We copy the spelling, punctuation etc. verbatim.

SPECIAL TERMS TO AGENTS.

Having opened up a QUEEN BREEDING APIARY in the South, we are now prepared to furnish Early Queens and Bees for the Northern Market, and having made arrangments to raise the coming season,

5,000 Italian Queen Bees.
5,000 Nucle Colonies.
1,000 Full Colonies.

To sell all these, we will have to have a host of Agents, and to get them we have determined to put prices down to agents so low that any one can take hold of it and get one full colony of Italian Bees for nothing. We will send every thing named for fifteen in our large circular for five dollars and for two dollars extra will send one pure Italian Queen Bees, ("one bees") or for five dollars extra. Ten dollars in all will send one four full sized frame Nucle Colony of Italian Bees with Bees enough to soon make a full Colony, or for ten dollars extra, fifteen dollars in all, we will send one full Colony of Italian Bees. Everything named will be shipped at once ("that must be the 'Nucle'") except the Bees and Queens. They will be sent the first of May from our Apaiarys at Indianapolis, Ind., or Cincinnati, Ohio. Remember this offer is to Agents only and will remain open only to the first of February, 1874, after which the prices will be as before advertised. We will say that Agents who will devote their whole time, can make $100 or $500 per month and local Agents can make from $100 to $500 annually and loose but little or no time taking orders for us. Send at once and secure any Agency.

Address,
N. C. MITCHELL,
Indianapolis, Ind., or Cincinnati, Ohio.

Now if Mr. M. really is going to have 5000 Queens and 5000 "Nucles" (whatever the latter may be) we will help him sell them with all pleasure providing he will first pay up old scores and send the queens already paid for and so long promised.

We are sorry to say reports do not show favorably of his business transactions; a subscriber just now writes:

"A Westmoreland Co., Pa. man told me that N. C. Michell had sold five receipts for $50 in one day in his vicinity."

And again on sending the name of a new subscriber:

"He has made more out of bees than any man in the county he lives in, he uses the old box hive but got 25 Queens from me. He lately purchased a $10 receipt of N. C. Michell. I wrote him that I thought Gleanings would be worth as much as the receipt.

I am not sure but he ought to have a back No. of GLEANINGS describing Mitchell."

Another in sending us one of the numerous letters which Mr. M. is sending to all parts of the country claiming he could teach *any person* to take from a good colony of bees from *one* to *three hundred dollars* worth of honey annually, closes as follows:

"I enclose a letter *which speaks* for itself. It was handed to me by a friend. Such nonsense should be exposed, although I am sorry for Mitchell, as I learn that he is in rather poor circumstances."

We too are sorry for the man, and more sorry that he does not scruple to take money from his fellow men without rendering any, or any *just* equivalent. We sincerely hope that he, and every other man or woman may learn that getting money by other means than fair, honest days works of either hand or brain, is sure to react sooner or later.

"Bee Charms," "Patent Hives," and the like have almost ceased to cast an odium over our innocent branch of industry, and all that is needed more is the strong voice of the people to declare we will have all valuable information free, and we will put down at once all attempts to beguile money from the honest, and unsuspecting, by the smooth tongued skill of designing hypocrites.

A subscriber asks if it were not proper to consider advertisements of Queens fertilized in confinement, as humbugs and swindles. As the matter rests now, we should without hesitation decide in the affirmative. If there exists a bee-keeper who can succeed in the operation, we invite him to come forward and give a public exhibition of it to the people, for nothing short can be received as evidence; we will answer that enough can be raised to pay all trouble and expense.

More than one of our number in counting the time wasted in useless experiments to say nothing of the money, may be considered excusable in feeling indignant, and our friends in Germany we have learned by private advices, have had their share of humilating disappointment. The matter seems to have been dropped by universal consent during the past season and we cannot help wondering if the very ones who gave the matter so positively a short time ago, are not beginning to think now *they* were mistaken. The fact that Mitchell even now advertises instructions in the matter is anything but flattering to the enterprise.

◆

[For Gleanings.]

CAN BEE-KEEPERS AGREE ON A STANDARD FRAME ?

FROM E. GALLUP.

DEAR NOVICE:— Please say through your GLEANINGS that if I were going to commence anew I should prefer about the size of the Adair frame, [*not the Adair* SECTION *by any means.*] For a rapid increase of stock, queen raising etc. the small size cannot be beat but when we come to other considerations we *certainly* should prefer a medium between the two extremes, and it certainly seems to me that the extremeist's ought to be willing to meet half way and recommend all new beginners to adopt a medium and uniform size of frame. I would like to see this introduced as a resolution at our next National Convention, and adopted. Of course such a resolution would not compel us old fogies to alter the size or style of the hives we already have. Still I think that I can see a great advantage that would result if all Bee-keepers used a uniform size and style of frame.

Many thanks friend G. for giving us the aid of your judgment on a matter that needs it sorely. Of course it is not necessary that we should all change our present frames but if the veterans *could* agree on one frame as being advisable as a standard, what a "glorious help" all around 'twould be.

We feel sure a brisk trade is soon to spring up in empty combs, if they can only be purchased with the full assurance of fitting nicely in our hives, and this can only be done by having all uniform.

As we were unable to interest any one in the matter, we got up the diagram on our price list from what facts we could gather hoping it might attract enough attention to enable us to set the matter right, if we were in error.

Considerable discussion has been drawn out on the amount of space that should be given between the hive and frame and also on the length of the projection for hanging the frame on the rabbet. We would suggest ¾ inch for the latter and ⅜ inch on the former; as it is almost impossible to get the space so exact that we shall not vary more than ⅛, we would suggest that the workmanship should never allow the space to be less than ¼ nor greater than ½ inch. We rather prefer the latter to be sure that no bees are even *squeezed*; and we have no trouble with bits of comb built when the extractor is used as frequenty as it should be; we would also have a full half inch between the bottom bar and bottom board.

Another point *must* be considered but we dislike to do it, because it may be received by some unkindly, but as we feel sure the mass of honey raisers will agree with us, we will try, 'tis this: That any method of supporting frames in the hive, as yet before the public, except suspension, has been proved to be utterly out of the question under consideration, as are also frames with closed tops, bottoms, or ends.

However, we shall be most happy to hear from the advocates of any of the above, and will promise to give any facts or evidence furnished, a most careful consideration. The replies we have received to Prob. 4th, Vol 1st., have given us a pretty fair view of the general decision in regard to frames.

PHOTO'S OF APIARIES.

A. I. ROOT & CO:—Enclosed find $1.00 for the GLEANINGS and Photo. I am sending mine, which was made before your articles "How to start an Apiary" came out, or I should have followed your directions. By looking close you'll see a few Simplicities, among the hives. I mean to test them the coming summer and report.

F. H. HARKINS, Home, Minn.

Could our readers all see the view spread before us on the small card we feel sure all would unite in saying "Our hearty thanks, Mr. H." As we can't pass it around to all, we'll try and tell what we can see with the aid of a magnifier.

About 100 hives are scattered over a level field with an octagonal Honey-house in their midst, and a pleasant looking wood for a background. In the fore-ground stands our friend, as we suppose, in his shirt sleeves and his three boys are assisting. We are sorry we can't discover any girls or women about, for an apiary in our opinion is incomplete without them; has our friend no daughters as well, and does'nt Mrs. H. take to bees? There certainly is no danger, for one of the juveniles is barefooted, and we are much pleased to see that, although hives are open, the Extractor going, and H. himself "uncapping," nothing in the shape of Bee-veils is used at all by any one, and a little "cub" that we would like to pinch stands beside an open hive as happy and unconcerned as if he never heard that bees could sting. The hives look precisely like the Langstroth hives we use, and the Simplicities too, but why does he tip up the latter? One beauty of them is that they can always be kept perfectly level.

With all those hives full of bees it seems that the Peabody machine would never keep up, and again the youth filling jars with a quart cup should let some of the girls do that, and the whole machinery should be arranged so that the honey will strain and run itself into the jars without even stopping until 'tis "dinner time" or something else "funny" happens. We would'nt turn those fine looking boys out of the apiary by any means, for they are needed to carry combs so that "Papa" can as he removes them, carefully study the condition and needs of each stock, while "Katie" or some feminine "P. G." attends to the uncapping and extracting machinery.

If the whole lot of hives should "take a notion" to yield 5 or 10 lbs. each daily, quite a number of little folks might be found vastly useful.

By the way, we should be pleased to exchange Photo. of our Apiary for that of the Apiary of any of our friends. We want to get up a large "three banded" Album.

Heads of Grain,
FROM DIFFERENT FIELDS.

PLEASE bear with me if I relate a little of our bee experience which has been a good deal disheartening, many has been the time this summer that both Husband and I have wished we had let bees alone, but there was no backing out now, without quite a loss which we could ill afford. Two years ago this winter we brought home one swarm of bees, the next summer they swarmed twice and gave us about three dollars surplus, one of the swarms filled the hive of 2000 cubic inches, box hives, clear to the bottom, so we thought we would do as some of our neighbors did, pry off the top and take out some of the honey, we inquired of half a dozen or more of our neighbor bee keepers if it would do any harm, they could not see that it would, so one hot day in Aug. or Sept. we went to work. but such a muss as we got into—bees honey and all squashed down together, it set us thinking if there was not a better way; so last winter or fall we borrowed some bee books, bought some, and sent for some papers and during the last year we have learned something. We had 15 stocks in the spring and increased to 27 but have had to feed and nurse them all summer.

We had a fine prospect for buckwheat harvest but an early frost killed it, the bees had scarce any stores in their hives, and we began to feed near the first of July [just enough to keep them] from ¼ to ½ teacup daily, in the evening; as soon as the frost killed the flowers we fed for winter stores, in all we fed about three barrels, $30.00 worth of A sugar, made into a syrup. For their fall feed, we put into three quarts of the syrup one teaspoonful of cream of tartar and 'tis nearly all sealed up nicely now; *We think* they are in pretty good condition, each hive having from 25 to 35 or 40 lbs.

Husband wishes me to ask how you manage to get your bees to take down the syrup so fast? [we read your article in the *A. B. J.*] Our bees were ten days or more taking down their winter stores, we

used a quart oyster can, one of the tall ones with a corn cob and some little sticks in them and on the outside, it is a real tedious job the way we had to feed our bees. Mrs. S. J. W. AXTELL,
Roseville, Warren Co., Ills. Nov. 22nd, 1873.

Our Friends certainly deserve success after the discouragements they have met with, and we have no doubt but they will be prepared to give us an encouraging report next season. With the sugar stores they have so bountifully supplied them we should consider their chances for safe wintering almost a certainty.

DEAR NOVICE: On page 5 of No. 1. Vol. II. of GLEANINGS I find a very proper expression, which deserves mentioning. Sometime ago we were taught to measure bees by the quart, by brother Hosmer. This has done a great deal of mischief. All of my friends and myself included, understood a quart of bees to be a very small swarm. One of my zealous friends reduced his swarms to a quart by shaking the superfluous bees on the snow. The large number of bees in the hives was what had ruined his bees in winters before this. Now he had it; but alas! that winter, my friend lost almost all he had. I had supposed that and told my friend so when I learned what he had done. Now, we understand a quart of bees to be a good strong swarm, that is, what we call a good strong swarm in winter. I don't blame brother Hosmer; no doubt he knew what he meant, but the expression "a quart of bees" was very unhappy indeed. Now, answering Mr. Patterson's questions who asks how many combs should be covered by a colony in October to enable them to winter, you say! "If you do not see bees clustered in at least three spaces during a cool day you had better not undertake to winter them. If they can be seen in four spaces call them fair, five spaces good, six spaces fine, seven tip top." etc.

This is perfectly plain and cannot be misunderstood by anybody. I therefore move that all quart measures be abolished when speaking about our bees henceforth.

CHARLES F. MUTH, Cincinnati, O.

I am wintering 3 swarms of bees on box honey one year old, the bees in like condition as near as possible to last winter, to find out if I can whether it was honey or season that caused destruction among my bees one year ago.

THOMAS PIERSON, Ghent, Ohio.

Give us the result *by all means* friend P. such experiments are worth more than whole columns of theory.

Mr. N. what am I to do, in looking over my bees in the middle of Dec. I found they were getting in a bad condition, the combs were wet and mouldy. I went to work as per GLEANINGS and made each hive a quilt, I put them on top of frames over the bees and put the honey board over them, the honey boards have three ventilator holes in them, have I done right? I have them in a room in the house, the temperature ranges from 34° to 50° so far, I am keeping a diary of the temperature in the room from the first of Jan.; the fourth of Jan. was a warm day, I carried most of them out, they had a good fly, carried them back at night and so they remain.

I have a small room I am keeping a light stock of bees in for experiment and feeding them all they will take of sugar syrup, the temperature ranges from 40° to 70° do you think they will increase in strength before spring? They are very lively now, I have a cage for them right against the window so they can exercise themselves when they choose. I have no trouble with them going back in the hive.

Would it answer at the time when we use the extractor to move the hives and bees say 50 feet from their stand?

M. RICHARDSON, Port Colborne, Canada.

Don't put a honey-board over the quilt by any means. At a temperature of 50° we should prefer removing even the quilt if the bees were kept in by wire-cloth. We are very glad to hear you have succeeded in letting the bees fly in doors, tell us how the colony turns out by all means, as we have told friend Pierson just before you. Your plan for extracting we think would not do; you would get the young bees lost and possibly the Queen.

I have extracted 18 gallons this month, warmed the room to about 85° had no trouble extracting; have put up a few jars, find them full of particles of wax, is there any way to get rid of it? give me what information you can and much oblige. J. H. Bolles.
Jan. 23rd, 1874. Watertown, Wis.

If you use a strainer of cheese cloth, such as we described in Vol. 1, attached to your extractor, you will have no such trouble. Heating honey to the boiling point injures the sale of it by darkening the color, but the honey may be evaporated to any desired consistency, even to candy, in a slow oven without injury.

I cannot agree with J. Bolin as to cold killing bees; in the winter of '71—'72 I wintered a stock in a 3-8 pine nail keg, very open, which stood on the west side of a shed some three feet off the ground so as to get all the benefit of all the cold winter blasts; they came out all right in the spring.

We have many such reports which it seems to us Mr. Quinby too, would do well to consider in rendering his decisions. Our friend goes on to attribute the cause to dampness from frost etc. but we have many severe cases of it where they were kept in dry cellars that did not freeze at all. He adds further:

I dug a hole and put one in, put boards over it and piled on straw, fed it all winter on sugar-syrup, and my experience was, and I examined them every time it was warm, that if there came a thaw lasting some days, but not so bees could fly, they would commence to soil their frames; if they could fly it would cease. Ed. Wellington, Riverton, Iowa.

Just as we should expect, for syrup fed in cold weather unless days occur that the bees can fly, invariably produces dysentery or something much like it; as we have said repeatedly, it must be *sealed up* in warm weather

Sealed honey, however often produces the most aggravated cases. We, should have preferred to have the bees out of the hole, and in the sun.

CONCERNING PROBLEM NO. 19.

FRIEND NOVICE:—I have been letting a few of my bees fly according to the following plan.

Make a light frame about two feet square, cover the four sides with wire-cloth and the top with thin boards except a square hole in the center, about as large as the inside of the hive; place a swarm of bees on this cage in a warm room and let them fly.

Do you think it will be an injury to the bees?
Jan. 5th, 1874. HENRY PALMER, Hart, Mich.

An appeal for further particulars brought the following:

The bees do get back into the cluster all right. In all those examined since their flight, have found brood: they had none before.
Jan. 10th, 1874. H. P.

It seems the above must answer the purpose. It might prove an injury to a strong colony to start brood-rearing in Jan., but we think it would certainly prove advantageous to a weak one, providing they could have warm quarters in which to mature their brood.

Our own experimental colony after losing quite a number of their force in the wire-cloth house experiment, survived but a short time after a second reduction of their numbers, caused by carelessly shutting down the wire-cloth cover to their hive. Of course they flew to the windows and as it was, just about the first of the year, in our hurry they were not noticed until 'twas too late.

With the Simplicity hive we think flying room could be given in extra stories placed either above or below with wire-cloth, to admit light and to prevent them from getting out and lost.

OUR, "Latest Intelligence" CORNER

Questions not too lengthy, may be answered through this department even if not received until within two days, of the first of the month; and in two days more, nothing preventing, you may have your paper containing the reply. If our friends would use a separate piece of paper for this, and in fact for each of the departments, and write on one side only t'would be quite a favor, but if it's too much trouble, don't do it, for we want to hear from you any way.

JANUARY 29TH, 1873.

It's just 11 o'clock & we've a fine wind for the "Print"

Where's Adair's *Annals* for December?

Mrs. Tupper's Journal reached us Jan. 23rd, and as usual, contains much of value.

J. L. Wolfenden, Adams, Wis. writes: "Tell that man he can take the propolis off his quilts by pounding and rubbing them briskly in the open air on a cold day, I can clean one. so that it is just about as good as new in ten minutes."

King's *Magazine* for *Feb.* made its appearance on the 27th. Wonder if they don't get up before daylight? We are informed they have engaged the services of Mr. Quinby for this year, who will doubtless add much to the value of their Journal.

"Why don't 'Novice' attach a 'Governor' to his 'windmill' power for his 'Print' and make her run kind of sober and steady? It can be done surely," writes a pleasant friend from Pa. As to whether "she" has become any more "steady" in her habits our friend can judge by the appearance of the present No.

Bee World for Jan. made its appearance on the 27th, it numbers among its contributors some of our best Apiarists, and as Mr. Moon promises to make it the exponent of our Southern Bee-keepers, we would kindly suggest to him the propriety of being more careful of punctuation, spelling and "dictionary;" they may feel that they are not fairly represented before, or in, the *World*. Monthly, $2.00, Rome, Ga.

P. S.—Mr. Moon's attempts at Journalism have heretofore been so short lived, that we must for the present decline adding the *World* to our list of Bee Culture Periodicals.

A. B. J. for Jan. made its appearance on the 16th. in a beautiful new dress and with a clear bright typography that we *novices* in the "art preservative," could only resolve to try to equal.

Although most of the matter is as usual, valuable, we cannot help remonstrating against the publication of such articles as the foreign one entitled "Italian Bees.—Their Worthlessness."

Where one man stubbornly sets himself up in opposition to the testimony of hundreds, we might almost say thousands, we have found it generally the case, that he does so with a view of gaining popularity thereby, or attracting attention by his eccentricity. They only do mischief by leading astray beginners and outsiders, for those of any practical experience with the Italians regard such an article, as they would one recommending us to discard horses and use ox teams instead. Both sides to a question is all very well, but 'twould be folly now to go over ground so well established years ago.

We know of but one man now on this side of the Atlantic who would be likely to take that side of the subject, and he has too much good sense to persist in it long if he be let alone.

If there is a probability of agreeing on a standard frame, can we not have also a standard hive?

We have just filled an order for one as follows;

From a board 14¼ inches wide, cut pieces 45 inches long, two for each hive; straiten one edge of each and then cut them square in two so as to make a side and end from each respectively 15 3-8, and 30 inches. Rabbet the ends of side pieces 3-8 by ⅞, and then cut off on a bevel from both sides and ends, strips 1¾ wide, these are to go around the cover. Also bevel the lower edges of the body pieces at the same time they are trimmed to an equal width, and then rabbet the upper edge of all side pieces 1 by 3-8 for a place to hold the frames, and the body is ready to nail. For a cover, cut from a board 16 3-8 inches wide, pieces just length of side-pieces viz: 20 inches; rabbet ⅞ by 3-8 clear around and nail in aforementioned strips. See "Hives, to make," Vol. I. for more explicit directions. Hinge the cover as you like, and make a bottom-board in the same way or nail on a permanent one, for as this hive holds 20 Adair frames it will probably never be used two-story. The principal objection to it is, being obliged to carry the whole into winter quarters; but if only *just as much honey* can be secured with it, we don't see but we had best make broader shelves and get some one to help "lug 'em in," for they will be so much handier for extracting, and our surplus comb can always be kept right at hand. What do our people say to trying to see how near we can all agree on a STANDARD HIVE AND FRAME. As Gallup has given us his opinion on a frame, will he be so kind as to say as much for a hive for it?

Directions for making Buzz-saws to be run by foot power, with diagram of top of table will be given next month.

$1.00 Queens.

DID your queens hatched by artifical heat become fertilized? If so and from mothers of undoubted purity I should think they would be very desirable, as of course there was much less probability of their meeting black drones than those hatched naturally. In one of your recent articles you speak of a fifty four cage queen nursery. Are they of different sizes? the only one I remember seeing advertised is Mr. Davis's for $5.00. How early do you think queens could be safely sent from your apiary? Our bees here commence swarming so early that it would be almost impossible to get them here by that time.

ANNA SAUNDERS,
Woodville, Miss. Dec. 12th, 1873.

All Queens (except some lost of course) hatched by artificial heat became fertilized except three or four that were hatched too late to enable them to fly out. By keeping Italian drones in queenless stocks, or by causing them to be reared late by excessive feeding, we can most assuredly secure greater probabilities of having them purely fertilized. We may remark here that 'tis quite a difficult matter to induce drone rearing out of season; we have only succeeded once in so doing and that was in Oct. 1872, when we gave one colony a *whole barrel* of syrup at once, arranged on the plan of the "tea-kettle feeder," giving the combs to other colonies as fast as they were filled and sealed. A host of drones were reared and their queen which was an old one, was superseded; the young one becoming fertilized and proving herself one of our best this season.

In regard to nurseries: We used one of Jewel Davis's patented ones, side by side with one of our own make the past season, the latter proving much the lightest, and most economical of the animal heat of the hive, although the actual cost did not exceed *two* dollars. Either of these had to be lifted out of the hive to make an examination, and to insert or take out cells or queens, some of the little doors had to be opened; mischievous young bees had to be got out or *in* etc.; but with the 54 cage nursery we had no bees in the way at all, and a simple rolling back of the cloth opened every cell or queen to view at once. Now it would almost seem that this latter arrangement should satisfy every one, but in all these nurseries we are at the mercy and caprice of the weather and the outside cells would many times fail to hatch. Artificial heat we found a perfect remedy, and large yellow queens such as are ordinarily never seen only during our warmest summer weather became the rule, and poorly sized or colored ones the exception.

Are we not right in considering the latter plan in connection with our discovery that queens *just hatched* could be "let loose" any where, far in advance of any of the nurseries?

Now Miss, or Mrs. Anna, instead of telling you how soon we can rear queens in Ohio, we would most earnestly urge that you should lend a hand. With the great advantages of your southern clime you should be able to rear a *thousand queens in a season*, which we should consider a very fair income for a lady to secure, especially as it may be done all at her own home. We think we can send you customers without charge for all you can produce. Somebody in the southern states *must* rear queens, we don't see how we can get along otherwise.

We presume it will not be safe to calculate on queens in our locality much before June 1st, although we are going to try hard to "steal a march" on the weather. In answer to a great number of inquiries as to how soon we can furnish from one to a dozen, we shall have to say we can only promise to let you know when they are ready. We book orders with or without the money but the former always have the preference, and *none* will be shipped until paid for.

I shall still continue to raise dollar queens. so you may put me down in your list, I want to raise 500 at least and will more if I can. I E Daniels, Lodi, Ohio.

I will undertake to rear queens for $1.00, under the conditions you name. Dr. J. P. H. Brown.
Augusta. Ga.

Glad to add your names to our list. Several have asked if we could sell 50 or 100 at one time, any cheaper. *We* should say no, not even 1000. We will give a list of the "Volunteers" in the "cause" when the season opens.

HONEY COLUMN.

I HAVE 1000 lbs. of extracted honey that I would like to sell at 20c.

R. WILKIN, Cadiz, O.

We clip the following from an article from "E. A." in the *Cincinnati Commercial.*

A little time ago my friends the Quintuses bought some honey. The grocer had two kinds of honey—strained honey sealed up in a bottle, and honey in the comb, in a little square wooden frame, just as the bees made it. [The bees never saw the other.] With visions of the delicious strained honey of his grandmother's time before his eyes, Quintus bought a bottle of the stuff called strained honey, and carried it home rejoicing. The grocer warranted it to be pure strained honey. The Quintuses proceeded to unbottle it and pour it over the morning buckwheat cakes—so delightful, you know, buckwheat cakes and honey, nothing's like 'em. Alas for the honeyed hopes of humanity! Quintus' strained honey was sweetened water. Quintus had paid forty cents per pound for water. Maybe water'll be worth that much before the new Water-works are built, but it's nothing like so high as that now. Quintus tried it again. He wouldn't give it up. The second time he bought the comb honey, in the little wooden frame. This sort of honey, comb and all, was worth fifty cents per pound. Quintus was surprised at that. The grocer had assured him that the strained honey was the simon-pure article. Now, if that was pure honey, how on earth could the bee-keeper afford the labor of crushing the comb, straining it out, buying the cork and bottle, putting the honey into the bottle, and sealing it up, and then sell it ten cents per pound cheaper than he sold it before he took it out of the comb. Quintus has been studying the problem ever since, and he can't get it through his head yet. He hereby submits the question to all grocers and bee-keepers for their consideration. Quintus bought the little frame of honey, though. The grocer weighed it to see how much honey there was. He put a large piece of heavy brown paper upon the scales first; then he wrapped the frame of honey up in a quantity of other paper; then he weighed the whole together—paper, pine frame and honey. It weighed a pound and a half, if I am not mistaken. The grocer said there was a pound and a half of honey. Thus he sold brown paper and pine wood at the rate of fifty cents per pound. Quintus has noticed since, and he finds that his grocer sells all his brown paper in much the same way. Quintus thinks of setting up in the grocery line and selling brown paper at fifty cents a pound.

Cannot some one set "E. A." on her feet with her face turned in the right direction? She evidently "means well." If she will give us her address we'll send her a jar of "strained" honey, equal to "grandmother's."

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to NATIONAL BEE JOURNAL, now published and edited by
ELLEN S. TUPPER, Des Moines, Iowa.
Liberal terms to Agents. Specimen number free.

DO **TRY IT 3 Months for 10 Cents;** or with $3 Chromo for 50 cents; or 6 months with "The Flowers of Paradise," a first-class $6 Chromo, 15½x21 inches, for $1. The National Agriculturist and Bee Journal is a 16-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75**. Send now for samples, and **Liberal Terms to Agents free.** H. A. KING & Co., 14 Murray St., N. Y. 1w2

MOORE'S RURAL NEW-YORKER contains Sixteen Quarto Pages, weekly, finely and profusely Illustrated and neatly Printed. Only $2.50 per year—in clubs of ten or more, $5 per copy. *Now is the Time to Subscribe for* 1874. Great Premiums or Cash Commissions to Club Agents. Specimens, Premium Lists, &c. sent FREE to all disposed to act as Agents. Address

D. D. T. MOORE, New York City.

The Best Paper! Try It!!

The **Scientific American** is the cheapest and best illustrated weekly paper published. Every number contains from 10 to 15 original engravings of new machinery, novel inventions, Bridges, Engineering works, Architecture, improved Farm Implements, and every new discovery in Chemistry. A year's numbers contain 832 pages and several hundred engravings. Thousands of volumes are preserved for reference and binding. The practical receipts are well worth ten times the subscription price. Terms, $3 a year by mail. Specimens sent free. May be had of all News Dealers.

PATENTS obtained on the best terms. Models of new inventions and sketches examined, and advice free. All patents are published in the Scientific American the week they issue. Send for Pamphlets, 110 pages, containing laws and full directions for obtaining Patents.

Address for the Paper, or concerning Patents, MUNN & CO., 37 Park Row, N. Y. Branch Office, cor. F and 7th Sts., Washington, D. C. 1tf

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO.

Vol. II BY A. I. ROOT & CO. No. 3

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

[*Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.*]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

MARCH.

CONTENTS:

Page.
How to Conduct an Apiary....27
Can we agree on a STANDARD FRAME....28
Can we agree on a STANDARD HIVE....28
Pruning the Grape Vines....28
Raising Bees in a "hot bed"....27, 28
Spring Feeding....28
Artificial Pasturage....28
Alsike Clover....29
Tall Hives for wintering....29
Dadant's Divisible Quinby Frames....29
Foot power Buzz saw, for Hive making....32
Depository of Blasted Hopes....32
Reports Encouraging....32
Shall we Clip Queens Wings?....32
Humbugs and Swindles....32

Page.
Melting Candied Honey....33
Heads of Grain....33
About *Us*....30, 35
Honey Column....33
Catnip as a honey plant....34
Can Bees be kept in a City?....34
Review of the Bee Journals....35
Bee Journals and Punctuality....35
Concerning Problem No. 19....28, 34
"Latest Intelligence" Corner....35
Wintering....35
$1.00 Queens....36
Who will rear Queens in the South....36
Single story versus Two story....29, 36
Quinby's Non Swarming Hive....36

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space. each insertion, cash in advance: and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross	$6.50
Two " " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross	19.00
Labels for above, " "	.65
The same with printed address, per 1000	4.25

CHOICE NEW ALSIKE CLOVER SEED.

One bushel (60 lbs.) at	$20.00
½ " "	10.00
¼ " "	5.00
One pound, "	.50

Has arrived and is for sale. Also

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

For further particulars, Address,

CHAS. F. MUTH,
1tf Cincinnati, O.

SALE OF 400 COLONIES OF ITALIAN HONEY BEES.

Having accepted the office of cashier of the Farmers & Merchants Bank of Jefferson, which was lately organized in this place, I will be unable to care for all the 850 stocks of honey-bees I have now on hand; I will therefore sell 400 of them. These bees are all pure Italians, and will be sold as follows:

Single colonies,	$13.00
10—20 " per colony,	12.00
20—50 " or more "	11.50

These bees will be delivered free of charges at the express station in Jefferson, and safe arrival at the nearest express station of the purchaser guaranteed.

All these stocks of bees are in an 8 frame Langstroth movable comb hive, are in good condition and have honey enough to last them to May 15th, or longer.

Terms cash in advance.

ADAM GRIMM,
2t4 Jan. 20th. 1874. Jefferson, Wis.

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

No arrangement need be made with us to make hives. If you can make them at the prices given in our Circular, we think you will have plenty of orders near home.

DISSOLUTION AND REMOVAL.

The firm of BALDWIN BROS. is dissolved by mutual consent, the same to date from Nov. 1st, 1873.

L. W. BALDWIN,
A. A. BALDWIN,
P. BALDWIN.

The subscriber, having removed to Missouri, will continue to breed choice Italian Bees and Queens from the best stock that can be procured. Purity and safe arrival guaranteed. No circulars.

Prices:—Single Tested Queens, $3; Two for $5. Six or more, $2 each. Address L. W. BALDWIN,
Wellsville, Montgomery Co., Mo.

DO **TRY IT 3 Months for 10 Cents;** or with $3 Chromo for 50 cents; or 6 months with "The Flowers of Paradise," a first-class $6 Chromo, 15½x21 inches, for $1. The National Agriculturist and Bee Journal is a 16-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75.** Send now for samples, and **Liberal Terms to Agents free.** H. A. KING & Co., 14 Murray St., N. Y. 1w2

TESTED ITALIAN QUEENS—Sent by mail $3.00 each.

Nucleus Hives, untested Queen, bees and all sent by express for $3.00. Queens bred from pure mothers warranted fertile, with no other guarantee, sent by mail $1.00.

Orders will be filled strictly in rotation.

Address J. SHAW & SON, Chatham Center,
3tf or I. E. DANIELS, Lodi, Medina Co., O.

EGGS FOR HATCHING—White Leghorns from J. B. Smith's stock, exclusively. Lt. and Dk. Brahmas from Todd Herstine and T. William's prize taking strains. Also, Italian Queens at $1.00 each.

Address
3t5 J. A. BUCHANAN, Wintersville, Jeff. Co., O.

MOORE'S RURAL NEW-YORKER contains Sixteen Quarto Pages, weekly, finely and profusely Illustrated and neatly Printed. Only $2.50 per year—in clubs of ten or more, $2 per copy. *Now is the Time to Subscribe for* 1874. Great Premiums or Cash Commissions to Club Agents. Specimens, Premium Lists, &c. sent FREE to all disposed to act as Agents. Address

D. D. T. MOORE, New York City.

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to NATIONAL BEE JOURNAL, now published and edited by

ELLEN S. TUPPER, Des Moines, Iowa.

Liberal terms to Agents. Specimen number free.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address

DR. J. P. H. BROWN, Augusta, Ga.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume I, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY.

Vol. II. MARCH 1, 1874. No. III

HOW TO CONDUCT AN APIARY.

No. 3.

AS "order is heavens first law" we trust we shall be excused for considering that the first work to be done in March is to put the Apiary in complete order. Even before the bees are removed from their winter quarters we would insist that all rubbish of every description be cleaned up, if any has collected during the winter, and to avoid the unpleasantness of walking about in the soft ground we would the first thing, get a load or two of clean sawdust and make paths of it, to where each hive is to stand, and a good broad one to your own door.

As soon as the bees are in their places we shall expect you to see to every hive daily, and we appeal to the lady of the house if it is not too much to tolerate having muddy feet constantly coming in, to say nothing of the injury to your own health, from standing in the mud or wet ground and grass, if you should happen to make a prolonged stay at something unusual about some of the hives; besides wherever "Papa" or "sister" or "Auntie" goes, of course the little ones will want to go too, in fact should go, and we want to make it a pleasant place for all. When we first took possession of our present apiary so many of the bees got drowned during their first flight in the spring in puddles and standing water, that we got exasperated and in spite of frost and snowy weather we went at it bodily and cut underdrains 30 inches deep across the whole piece every two rods, and then as no tile were procurable right off, we sawed up pine dry goods boxes and covered the drains with short boards laid crosswise, then filled them up. That was eight years ago this spring and there has never been any standing water since, about our apiary.

A pine half barrel let in the ground at a place where several of the drains meet, affords a view at all times of the working of them, and they have never failed to take away all surplus water.

We presume the success of our Concords depends somewhat on these same underdrains, and by the way these grape vines should be pruned, by cutting all shoots down within two buds of the horizontal arms, as soon as this reaches our readers if it has not been done before. The proper time for pruning varies with different localities, but it should be done soon enough to prevent bleeding if possible, but prune them any way, for of all untidiness, a grape vine sprawling about the ground or making a brushheap of itself in an apiary is the most lamentable. Your success pecuniarily absolutely depends on keeping every thing trimmed up neatly; and while we think of it perhaps you had better make your sawdust paths first, then you can work around the vines and bees with pleasure.

We believe we never enjoyed ourselves better than when we had a wheelbarrow full of sawdust, the article being just scarce enough here to make it precious, and our "better half's" dust pan, (that was before the apiary could afford one of its own) with which we sprinkled just enough in the mud to make a clean footing, then rolled our barrow along and built a little further until we had white streets along beside and in front of the hives, that so captivated the children, they were ready to scream with delight, when told they were expected to get the fire shovels and run over the paths and pat the sawdust down until all was smooth and hard; stepping off into the mud subjects them to the penalty of being chased by "Papa's" wheelbarrow.

Weak colonies and in fact all of them should be well protected by Quilts, and if each colony can have two or three 'twill not be amiss in the spring. See that there is no crack nor crevice where the warm air from the cluster can escape, and keep the entrance so small that the bees can just pass out and in. As the frost is leaving the ground the stands will have a tendency to thaw on the south side first and thus tip them out of true; but until we can decide upon some remedy, which seems not so easy, we can watch them and prop up one side a little until the frost is out.

We hope a number of our readers will try the forcing plan given on another page, or will even try bedding a hive in the south side of a manure heap or one extemporized for the purpose. We can at least thus at small expense try the effect of a raised temperature, with absolute protection from all frosts, on brood rearing in the spring.

In regard to stimulative feeding in spring we really know of no better way than the "dry sugar" given last month; when the weather is such they cannot fly, turn up one corner of their quilt gently in the evening, and pour a few spoonfuls on the cluster.

'Tis true by cutting a hole through the quilt and covering it with wire cloth, we might do it a little handier, or we might use a variety of feeders but we dislike having so many traps around or having so many quilts with holes cut through them.

"P. G." has a plan of her own for feeding that has been quite successful, as follows: She makes an oblong bag of stout cotton and covers its mouth by sewing in a piece of coarse wire cloth, perhaps 1½ by 10 inches. This is placed between two combs moved slightly apart, near the cluster, and is filled by pouring the syrup through the wire cloth when the quilt is turned back slightly; the wire cloth holds the mouth of the bag open and prevents bees from getting into it. Whatever plan of feeding you propose in spring, do not do any thing that will allow the warm air to escape upward from the cluster.

ARTIFICIAL PASTURAGE.

The opening article in the *A. B. J.* for Feb. by Mr. Gallup, it seems to us strikes about at the root of the matter of raising plants or trees for bees. Almost every season the bees work on some plant that we had never noticed their visiting before; and with the exception of white clover we have had failures from all sources. Locust trees gave us such a crop in 1870, that we meditated planting an orchard of them; but we have had no honey of any account from them since, although they have been full of bloom; basswood has also been almost a failure for three years past in this locality: buckwheat is reported generally very uncertain, and the autumn flowers, unless in the vicinity of a large swamp seeem equally unreliable. It would seem extremely doubtful whether it will pay to undertake to raise any plant exclusively for bees, and we would advise none to unbertake it unless they have ample means; and it should also be remembered that 'tis folly to expect much from any source unless there be at least an acre of it. 'Twere well to consider whether the same money instead of being expended in artificial pasturage had not better be used for the purchase of sugar to feed, for in that case you are sure of the result, whether it be for queen-rearing, or for furnishing winter supplies.

Raising Rape for the seed, near an apiary might be a very profitable plan but as yet, we have so far as we know, had no direct practical report of its value in this country. We tried a small piece last season, and the grasshoppers ate off every leaf as soon as it appeared, but we propose trying it again this year. Alsike clover seems to be our only hope of any thing certain, and even here we have more reports of failures than positive success. If farmers could be induced to raise Alsike as they do red clover, there can be no question of its being a great benefit to beekeepers. It certainly must be profitable to raise it for seed, and we are surprised that the price is not only kept up but continues to rise. We were advised by our leading seedsmen to offer it in our circular at the same prices as last year, and the result has been that we have sold seed for 30c. that cost us 33c. because none of the new crop could be found in the market for a less price. If beekeepers can't make it pay to raise it for the honey, they certainly can for the seed, and as there is little danger of loss in the operation we should advise Alsike before every thing else, and while you are about it *give it plenty of manure*, and good culture, for lots of honey requires lots of plant food, and we "Young Americas" when we undertake a thing, like to make it a success if 'tis a possible thing in spite of obstacles that may chance to arise. Those who have the brain, muscle and energy that commands success in whatever they undertake, are the ones we want for beekeepers. See friend Nevin's letter, page 33.

PROBLEM 19 COMPLETELY SOLVED IN A NOVEL MANNER.

THE following experiment seems to have hit the solution of Prob. 19 so direct, and pleases us so much that we mark our friend paid for five years on GLEANINGS. We presume almost all of our readers are familiar with the construction of hot beds, and we think no possible harm can happen if this forcing process be undertaken as soon as this reaches you. Should you succeed in building a colony up to the "swarming pitch" by the first of April you will probably, if you keep them properly under control get a result in the way of honey, that will amply pay for a dozen hot beds and the attendant care.

Our Bees are in splendid condition so far, I was all through them on the 21st, (Jan.) and in some I found three sheets with brood in, and in none did I find more than a handful of dead bees. I feel as if we were safe for this time, and begin to look forward to our next honey season. My hives are all out of doors with straw mats on the combs, are dry and in fine order. I was somewhat surprised to hear you say that we could not have had the bee cholera in this section; why, some bee-keepers lost 60 and 70 hives, while others did not lose quite so many, for the simple reason they did not have them to lose, I am satisfied I would have lost all of mine last winter if I had not given upward ventilation, some I saved by that means when a mere remnant were left to tell the tale, and by careful nursing in what might be called a "hot bed" got a good return from them in the way of honey and artificial swarms. My hot bed consisted in surrounding a hive with about six inches of manure on the three sides and bottom, covering the tops with a quilt and mat and leaving the front open. It would have done you good to have seen how the Queen "spread herself;" I was a little afraid it might be too hot for them but I heard no complaints, and I saw eggs deposited and hatched out of the cluster just as we do in summer; it came out my best hive and returned me the most honey. I hope some others may try the same and give us the results.

H. E. CURRY, 208 West 4th, St. Cin. O.

Later: An appeal for further particulars brought the following;

In reply to your inquiries I am sorry to say I did not keep a record of my experiments. I had no idea of succeeding as well as I did or I would have been more particular, I think however, it was the latter part of March, but last year was a strange year, one it wont do to go by, if I remember we had very cold weather in April, even the blue birds were deceived. I thought of your lamp Queen Nursery and of Patent Incubators; the heat in those are kept up by means of a lamp and hot water, if the hot bed is as successful as I think it is, it will do just as well and perhaps better. I must close by thanking you for your kind offer of a five years subscription, and can assure you it is appreciated, at the same time I could not think for a moment of abusing good nature in such a way, but as long as GLEANINGS is conducted in the manner it is, I shall take pride in supporting it.

THE STANDARD HIVE AND FRAME.

IN our hasty description of a hive for the proposed standard frame in our last, we made an error in length of cover that was not noticed until half the papers were worked off, and still more humiliating was it to discover after all were off, that we had given directions for cutting a side and end respectively, 30 and 15⅜ inches from a board *forty five* inches in length. We really hope our carelessness has annoyed no one, and would plead as an excuse that the importance of the matter induced us to crowd it in hastily at the last minute. The 45 inches should read 46,and the cover 30 inches long.

That the matter is one of deep interest to many may be gathered from the following communications.

FRIEND NOVICE:—On page 23 last No. of GLEANINGS, in describing your standard hive you say "but if only just as much honey can be secured with it etc." That was just what troubled me one year ago, and so I made three one story hives, three foot long, and they gave the best satisfaction of any hives I ever used; had the entrance at the end, and by placing the brood in the centre, or back of the centre, I found the bees would store the honey in the back end every time before filling empty comb in the front end. Although it was a poor honey season, one swarm gathered 63 lbs. in three days; up to Aug. 1st, 215 lbs, then I divided and made three good swarms that gathered stores enough for winter.

I have concluded to make hives as follows: for summer, one story hives not less than three feet long, for winter, Simplicity hives 12 inches wide, to hold eight frames, which I think will hold bees and stores enough for wintering inside. HENRY PALMER,
Hart, Mich. Feb. 2nd, 1874.

Our opinion is quite favorable to your plan. Those eight frame hives which we think will be plenty large enough for wintering, will also answer a very good purpose for starting colonies before they get so large as to demand a full hive. Will not a 30 inch hive instead of three feet, answer for the majority?

FRIEND NOVICE:—GLEANINGS for Feb. rec'd about two hours ago, and among the many important subjects noticed is the Standard Frame question, I use a frame about the size of friend Gallup's and like it on many accounts better than larger frames, but if Bee-keepers could be induced to agree on, and adopt a Standard Frame, it would be of great benefit to all Bee-keepers and Manufacturers of hives also. My ideal frame would be a shallow one for summer, and a *deep* one for winter, and the only way I have thought of to combine the two desirable features, is to take the Langstroth or Quinby frame and use them horizontally for summer and perpendicularly for winter. I intend to experiment the coming season with Quinby size, as that just fits my hive one way. I propose to set the hives on end soon as the basswood season is over, so as to give the bees time to arrange their brood and the late honey or *sugar syrup*, in the prover position for winter. I have always noticed that swarms with plenty of sealed honey *immediately* above the cluster, keep the most quiet and winter the best in every respect. The swarm spoken of on page 22 that wintered in a nail keg so successfully, undoubtedly had plenty of sealed honey immediately above the cluster owing to the shape of the keg; now the same swarm hived in the same keg, and kept in a horizontal position, with the same exposure, would have stood a slim chance to winter.

This subject will bear a good deal of agitation, so let's hear from all. Yours for a Standard.
Mexico, N. Y. GEO. T. WHEELER

P. S.—If you want any hives manufactured to fill orders from the Eastern States, I would like to make some arrangement with you that would be satisfactory to both. I can make them "with knot holes or without." G. T. W.

Reports of late years seem to favor hives with a depth of frame from 9 to 10 inches, for wintering, rather than taller ones, and we are not sure the keg would not have wintered equally well on its side.

Mr.Quinby gave the plan several years ago, in the *Agriculturist*, of standing frame hives on end in winter, but we believe few practiced it. Bees in winter seem disposed to cluster at the top of the hive whatever may be its shape, and a hive rather shallow with a *close tight* quilt over the frames seems to afford them the best facilities, for brood-rearing.

ON THE SIZE OF THE FRAME.

DEAR NOVICE:—I have been very much surprised in seeing in your circular, that if you were to choose among the different frames used in this country, you would give the preference to Langstroth, then to Adair, then to American, and after these three, to Quinby.

This operation does not seem consistent with what you have written, on the American hive, in the *A. B. J.* for June 1872, page 274 where you say the bees raise more brood in the shallow, than in the high frames.

Beside, if you like the L. frames because they have 17⅝ inches in length, how is it you do not like the Q. frames? Is it because they are ⅞ longer? If you do not like the Q. frames because they are 2⅛ higher than the L. how is it that you prefer the Adair, which is of the same size, and the American, which is even 1¾ inches higher?

Before pronouncing your judgment did you try all these shapes of frames? If so, you have obtained results very different from what I have experienced.

For ten years I have used both sizes, Quinby and American; and after a trial carefully made, I concluded, three years ago, not to augment any more the number of my hives with square frames, 12 by 12, and to make only Quinby hives, accordingly, I have since peopled a second apiary, six miles from my residence, with Quinby hives exclusively. To day, in my home apiary, you will find more than one hundred Quinby hives, ready to receive my swarms, and not one square frame hive newly constructed.

For six or seven years, I have tested the laying ability of my Italian Queens. For that purpose all my hives, destined to produce honey, have been made with a capacity for eleven Quinby frames, or if American, sixteen. Last season I had here eighty stands, which I intended for gathering honey; about forty of each kind, besides my hives destined to make swarms and raise queens. By the first of June three of my Quinby hives had between seventy and seventy five thousand cells containing brood; while the best of my Americans had about ten thousand cells of brood less. Yet both kinds had equally young and prolific queens, the same pasture and the same care.

Besides, eight Quinby frames have a greater area than ten Langstroth, or eleven Adair, and are usually equal to twelve American. Do you not think that the work is more quickly done with 8, than with 10 or even 12 frames in the hive?

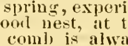
The area of comb filled with brood in the frame is always in spring like a sphere flattened at the bottom part. The bees, in spring, experience some hesitation to lengthen the brood nest, at the bottom; because the bottom of the comb is always colder than the sides. Hence the queen finds always more cells, warmed and ready to receive her eggs, at the sides, than at the lower part of the comb.

Lastly, it takes more bees to surround and warm 12 frames than 8, for instance, the compass of a Quinby frame measures 59½ inches, and for 8 frames 476 inches, while the 12 American frames measure 576 inches, and it takes 15 per cent more of bees to protect the same quantity of brood, and in the Langstroth hive 10 per cent more than in the Quinby. To conclude: I cannot admit, without protest, your opinion, as to the measure of the frames, for, in my opinion, you are mistaken in your classification.

For the benefit of your readers, I will tell you how I have solved the problem of making nuclei, to raise queens, with my great Quinby frame, without cutting the comb.

I have contrived to make some frames, divisible at will in two equal parts, all my hives, destined to raise queens, receive some of these divisible frames. I have also some small hives, or nuclei, fit to receive these half frames, when I want to people one of these small hives, I take a frame containing brood and honey; divide it in two parts and insert it in a small nucleus with partition board. Thus the Quinby hive gives only one frame, while the nucleus gets two.

DADANT'S DIVISIBLE FRAME: NO PATENT.



When the two parts are united, the buckle A, of wire of the frame with the tongue, enters in a button hole pierced at C; a small nail, easily removable, entering in the buckle at C, maintains the two parts together.

The same device can as well fit the L. frames. I have used it at least eight years, with the best results.
Hamilton, Ills., Feb. 4th 1874. Ch. Dadant.

Reply on page 35.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

MEDINA, OHIO.

Terms: 75c. Per Annum.
For Club Rates see Second Page.

MEDINA, MAR. 1, 1874.

MR. MUTH, sends us a sample honey Label in blue and gold with a Langstroth Bee Hive thereon that is rather neater than any thing we have seen heretofore.

◆

WE can furnish GLEANINGS with the *A. B. J.* for $2.25; with *Mrs. Tupper's Journal*, for the same; with *Bee Keeper's Mag.* $1.50, or all four of the above for $4.00. Terms, invariably cash in advance.

◆

JUST as we feared, and 'tis the *Prairie Farmer* that has copied from the *A. B, J.* the article on the *Worthlessness* of the Italians.

They have our thanks however for the aid they have given toward establishing a Standard Frame, by giving our article on the subject.

◆

IN *Mrs. Tupper's Journal* for Dec. page 287 we read: "Three thousand and six hundred workers will fill a quart measure." By careful count we find *One thousand nine hundred and eighty eight* clean, dry dead bees fill a quart measure, and judging therefrom we think *one thousand* live Italians would have to be squeezed some to get into a quart measure; at our estimate of $1.00 per quart, ten bees are worth just one cent, so you can see just how expensive 'tis to use a hive that smashes the little innocents.

◆

E. Kretchmer & Co., Coburg Iowa, write us they intend rearing 1000 $1 Queens the coming season, all from Imported Queen mothers; also that they sell a hive thoroughly painted for $1.00, without frames, all of which would be pleasant news were it not that Mr. K's. Circular, like his book gives one a very unfavorable opinion of the man. He seems now even more unscrupulous than of old, in copying the ideas of others as his own, and goes so far as to even make extracts in such a way as to entirely change and subvert the writers original meaning. In regard to his business habits we know nothing further than that he does not scruple to receive money for "rights" to devices, knowing they are utterly worthless for the purpose intended.

◆

IT were no more than just to our correspondents to inform them, while thanking them for their favors, that it is utterly impossible to publish *one fourth part* of the *good* articles sent us for publication. For instance: we have now on hand at least a dozen on wintering, worthy of a place but matter of more importance at this season, demands we dismiss the subject again until fall. In one of our former circulars we offered to pay for new, valuable matter, and we do so yet, but it should be borne in mind that unless the writer has had the care of a considerable number of colonies, the chances are much against his article being considered one we can afford to pay for. No apology need ever be made for writing *us* on Bee-culture; 'tis our business to carefully read and weigh the contents of each letter. Questions of a general nature we prefer to answer through these pages, all others with very few exceptions will receive prompt answers, to the best of our ability, by return mail. Where a subject has been discussed at length in the back numbers we cannot do more, than refer to such numbers.

◆

MR. KING, in speaking of the decease of Agassiz remarks; "He repudiated the repulsive Darwinian doctrine of development, with all the force of his impulsive nature." We hope we shall be excused for wondering if Mr. King too, has not read Darwin; it is not our province here to discuss his theory, but 'tis his due to state that Darwin's experiments with bees, to determine in what manner their combs are built (see Origin of species, page 216 to 224,) were perhaps more thorough, than any similar ones ever made by our modern bee-keepers. No Apiarist can fail to see that every line of what he writes on bees was the result only of careful and patient observation.

It may be well to state here that we first saw the book after having written our criticism on Agassiz' "Life in the Bee Hive" in our June No. of last year; it was then handed us by a friend, remarking that our account of comb building strangely agreed with Darwin's observations on the subject.

How much of Agassiz' *Life in the Bee Hive* was real observation, and how much guess work, Mr. K. knows full well. "Truth is mighty etc.," and should not be smothered, even out of respect to the memory of those departed.

◆

WE find to day, Feb. 9th, three more colonies dead. Two of them obviously died as did the two former ones, from lack of bees; the other presents to us a case not easy of solution. It had been one of our most active colonies of hybrids, and in fact the hive was christened the "Robber Chief" on account of their propensity to hustle out all hands at the faintest intimation of any such disturbance.

After their journey to the swamp, (they had been a populous two story hive) we found a large amount of dead bees on the bottom board, and a week or two later when they were fed, another heap of dead bees was brushed off; and on lifting them to go into winter quarters still another heap remained on the bottom board. An examination showed they had still kept dying until the last of them perished among clean combs of sealed sugar syrup, no trace of dysentery, and the bees were dry and clean. We can think of nothing amiss unless the bees were too old, but this seems very unsatisfactory, for some brood was reared in the fall we feel sure, we cannot now recollect how much, nor how late. It hardly seems proper to call this a disease when the bees seem so perfectly healthy.

Mr. Wilkin and some others mention similar cases. All the rest of our colonies with a few exceptions seem to be wintering finely.

P. S.——We measured *three quarts* of dead bees although every dead bee was carefully removed from the hive when housed Nov. 22nd.

Feb. 16——WE have just purchased two loads of coarse, fermenting manure at the livery stables; placed three hives on their summer stands with the entrances turned southward, directly under the grape vine trellisses; placed about 6 inches of manure under each, then protected the hives from being discolored etc., by standing cheap shingles all around them and on top, then covered the whole hive except the entrance at the south. As the hives are but 6 feet apart we make a winrow as it were of manure over each row of hives. The idea is to use manure enough to prevent the hive being exposed to a freezing temperature at any time, on the plan of a mild hot bed. The Simplicity hives again, show their great advantage over the others with their projections; but a very small amount comparitively, being needed to cover the former, both of shingles and manure.

HOW TO MAKE A FOOT POWER BUZZ-SAW, FOR MAKING HIVES.

THE following diagrams are drawn on a scale of ¼ inch to the foot; the same letters referring to the same parts in all.

Fig. 1

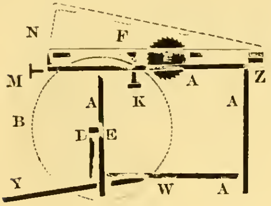


Fig. 2

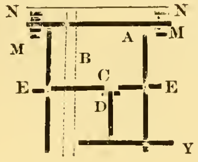


Fig. 5

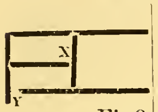


Fig. 4

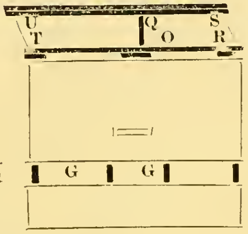


*Fig.*3

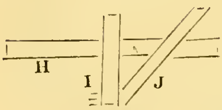
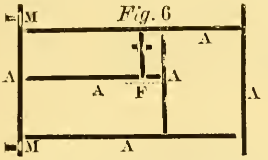


Fig. 6



A, A, A, etc. is the frame work made of hard wood 3 by 3 scantling, put together with mortises and tenons, and drawn up firmly with bolts. Fig. 1, is a front view; Fig. 2, a view from the end where the operator stands; Fig. 6, top frame work where the table top is raised up as in dotted lines in Fig. 1; Fig. 4, table top, and Fig. 5, treadle, The balance wheel B, seen in Figs. 1, and 2, should if possible be as much as 3 feet in diameter and weigh about 150 lbs; the shaft C, is made of a bar of square or round iron at least 1½ inches in diameter for the weight of balance given above. This shaft after the crank of 2¼ inches stroke is forged in at D, should measure about 1½ feet, and conical holes should be drilled in the ends to receive a heavy, pointed tempered steel screw, screwed into the front legs at E, E, thus giving a small amount of friction, with a ready means of screwing up the bearings whenever they become loose. Very much depends on a nice, true, balance wheel, but many saws that do very well are made with much lighter ones than the above, and some of them are even made of hard wood which however we cannot recommend; a better way is to buy some kind of an iron wheel, even one selected from heaps of old iron will many times do after being covered with wood and turned off true.

The position of the saw and the manner of supporting is clearly seen in Fig. 6; the saw should be about 8 inches in diameter and can usually be purchased best with the arbor, of some saw maker. The driving pulley should be about 2½ inches in diameter, but two, would be better if covered with rubber which can be had nicely adapted to the purpose, of J. W. Sutton, 95 Liberty St. N. Y. As we have arranged the pulley so near the balance, which seems almost unavoidable for ease in working, this rubber covering becomes very necessary unless we fix a pulley to take up the slack of the belt somewhere at F. The construction of the top will be seen at a glance at Fig. 4, it should be made of 1¼ inch hard well seasoned wood, screwed firmly to the 1½ by 2 inch pieces so as to leave the slot G, 4 inches wide, for the bar H, to slide in. You can exercise your skill in seeing how strait you can dress out H, and how nicely you can fit it to slide in G, for the accuracy of all of your work will depend much on this; also see if you can fit I, in place so perfectly square that you can saw out a piece of board so true on all sides that when turned clear around *every corner will be square.*

It should also be adjusted to make a perfect mitre such as is used in making picture frames etc. Spring stops are used in both of the bars I, and J, made of a strip of brass ¾ by 3 inches and about 1-16 thick, bent at right angles at ½ inch from the end; the long end is fastened by two screws in the bottom of a shallow mortise in such a way that the bent portion projects as seen at I, but can be pressed out of the way by a slight pressure, consequently when these stops are once set right for the sides, ends or cover of a hive, by holding the corner of the board against the proper one we always get *exactly the same measurement*; the same is true of frame stuff when held against J. For rabbeting etc 'tis very convenient to be enabled to raise and lower the whole top, this is done by the screw K, the lower bar of the top, being entered at the ends into holes made in blocks mortised in at Z, permitting the top turning on it so as to allow being raised as seen by the dotted lines in Fig. 1, also guides are hinged at each corner as seen in M, and N, to enter mortises in bar A, shown in Fig. 6.

O, is a strip 1½ inches square hinged with three common hinges to back of table top in such a way that it can be turned over on the top, or turned completely below the surface on the back side. The usual parallel stick P, which should be about 2½ square hardly needs description, it is attached to O, by the strips hinged to turn firmly at R, S, T and U, and fastened in its place by bar Q, with a set screw where it slides through a mortise in stick O.

Treadle, Fig. 5, is made of stuff about 2 by 3 and is pivoted on bars A, as seen at W, Fig. 1, in a manner similar to the balance shaft. The hook on the crank D, is pinned at its other end in the treadle at X; the step for the foot is a piece 1½ by 6 inches by 2 feet and is made to project at Y, for convenience in working at the side of the table in rabbeting etc.

Top of table 3 by 4½ feet; top of table from frame 3 inches. Top of table from floor 3 feet; distance between legs A, length 3 feet, width 2 feet outside. Length of treadle 3 feet; width as great as the space will admit. We would use a belt if soft about 3 inches wide.

It will be observed, the balance runs a little below the surface of the floor, and that we depend on having the front feet bolted very firmly to the floor as there is no room for crosspiece as in the back end.

So many directions are given for filing saws that we prefer that each one should learn by experience how to file his saw so as to have it cut nicely.

We have been asked to make our description very minute, which we must offer as an excuse for having given such lengthy details.

It will be observed, we have so arranged the table that it may be cleared in an instant of every obstacle, and it should be located in a room large enough to enable us to saw a sixteen foot board in two in the middle if necessary, as it often is, to enable us to use the best economy in working our lumber. With a good machine, and an expert active operator, the speed at which good hives may be made is almost incredible.

A quick, bright eyed boy or girl of a dozen years, when they have learned to handle the pieces, will assist almost one half, and if not kept at it too long at a time, will learn to enjoy it more than play.

For further particulars in using the machine see Vol. 1. To do nice work and to do it easily, use seasoned pine lumber planed accurately to exactly $\frac{7}{8}$ of an inch in thickness.

P. S.——W. Bingham & Co. Cleveland, O. furnish excellent saws both rip and cross cut, size mentioned, for $1.75. We think they can be sent by mail for about 10c. each, if wrapped in stout paper.

Humbugs and Swindles

Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

IT seems too bad to allow our old friend to monopolize this department but when we get an advertisement, and a kind letter from him direct, we certainly can't refuse to insert it; as we put it in the reading columns too, he really might afford to pay us extra. We are sorry to be obliged to advise our readers to get their Queens some way, before sending the money, for a number of letters seem to indicate that sending money to Mr. M. is like pouring water into a tunnel, you know perfectly well where you put it but that's all.

Columbia. Tenn. Feb. 11th, 1874.

MR. A. I. ROOT, DEAR SIR:—Please insert the enclosed advertisement in the next Number of your valuable paper, and let stand for six months, send bill in May. Would be glad to furnish you with any early Queens or Nucleus Colonies you may want; we will have Queens out in March. Send paper.

Yours truly, N. C. MITCHELL.

EARLY ITALIAN QUEEN BEES.

We can furnish any Number of Pure Italian Queens or Nuclei or full Colonies in April and May. Send for price list. Address N. C. MITCHELL,
Columbia, Tenn.

After May 1st, address Indianapolis, Ind. or Cin. O.

We trust you for the advertisement Mr. M., but GLEANINGS is, *cash in advance*.

G. H. Boughton's advertisement still appears in *Mrs. Tupper's Journal*, yet complaints keep coming in from those having sent him money.

DEPOSITORY OF BLASTED HOPES,

Or Letters From those who have made Bee Culture a Failure.

WE thought we had completely Italianized 12 of our colonies, but upon examination this week, they have the appearance of hybrids, can it be the cold weather? We have about 30 swarms in Langstroth hives, have been at an expense of $200 and more, and have never realized 10 per cent. At first we thought it was from increasing, next we could do better by Italianizing, this was worse for they swarmed too often—now we think it from the scarcity of Bee forage, though we have sown Mustard and Buckwheat and planted Borage, we shall now try Horse mint, and expect to try Linden, and think we will get 200 or 300 trees from you, next fall at the proper time, when do you think best? J. A. NELSON & SON,
Macon, Ga. Feb. 6th, 1874.

We are so little acquainted with the South we hardly know what to advise, but very much doubt the policy of raising artificial pasturage to help the matter. Have our friends used the extractor? Is there not some month in the year that gives a yield of honey greater than can be secured, and have our friends had their colonies strong and thrifty in anticipation of this? We are inclined to think with Mr. Quinby, that after we have secured the honey that is now wasted, there will be time enough to then think of artificial pasturage. Has none of the $200 gone for "patent hives"?

Have been very unfortunate for two years past, lost more than half my apiary, winter before last. Lost it *all* last winter, Italian, hybrid, and black. Stock on hand about 50 hives of empty combs, Supers, boxes, lumber, etc. etc.

Cause of loss, Melextractor; long cold winter; Cellar too cool; unwholesome autumn honey perhaps, etc.

Truly yours, J. W. MURRAY,
Excelsior, Minn. April 22nd, 1873.

We don't remember to have heard how our friend came out, but guess he is all right now, for our Western Apiarists have a way of "pitching in" and getting their 50 or 100 colonies again, that is amazing. We can hardly think the extractor should be blamed, although its owner might, if he used it to *starve* his bees.

Reports Encouraging.

I WILL give a few facts about my bees. 10 rather weak in the spring, gave, box honey, 400 lbs. extracted honey, 420 lbs. increase 12. My book shows I have sold the above, at an average price of 22c. Have had bad luck in getting purchased queens *on time*, think I shall try some of your advertised men next season. H. W. MINER, Sarinac, Mich.

P. S.—Considerable has been used in the family besides some remaining on hand not in above report.

I have 72 stocks of bees all in cellar, all O. K. I cut every Queen's wings off close to her body as soon as fertile, then I can attend to my business or go to church without loosing bees by swarming. I lost 75 stocks last winter; wintered out doors; commenced spring with 13 stocks; and did not divide until after June 15th. E. D. GODFREY, Red Oak, Iowa.

That's the sort! Bee-keepers should "Never say die." Why clip so much of the Queens wings? We don't like them to look like "bugs."

Last summer I felt the need of a saw to do my own cutting, (as I could not get my stuff cut neatly,) after reading your description of yours, I made one and have cut out 700, 3 lb. boxes, besides much other work, just as it ought to be done. Last summer I had 21 colonies, in September I increased 49, which at this date, are nice and dry and in good condition.

W. STUMP, Cin. O.

P. S.—In dividing I had Nucleus Queens ready for the new swarms.

HONEY COLUMN.

ONE of my honey customers here, a wholesaler told me the other day that he bought 100 cases Philadelphia (so called) white clover honey, but that he could not recommend it any more since he knew my honey, and that he would buy no more Philadelphia honey when his present stock was gone.

CHAS. F. MUTH, Cin. O.

Now is it not possible for the people to become so well posted on honey, that 'twould be as easy to palm off a poor article of *butter*, as honey. Butter makers well know that a poor article when thrown into market, finds its level right speedily. Why is it not so with honey?

YOU are welcome to the jar of honey, we have 30 more, it will kill the bees in winter, and hurt them any time, so will any honey that has fermented, and any honey will ferment in summer unless kept very cool, I do not know from what source it was obtained. We are putting up honey in glass tumblers with paper covers, one side is covered with wax, and made fast at the top with the same, it works first rate.

We had a curiosity to see some really *poor* honey—we don't get any here—and the above was rec'd in reply to some of our queries in regard to it after receiving it. It certainly is poor and what surprised us was that our "slow oven" process did'nt make it good. In regard to fermentation, we think our friend is wrong; we believe neither honey nor syrup can ferment unless it is too thin, i. e. contains too much water. We feel quite certain our Medina Co. clover honey as we now extract it, can not be made to ferment in any weather unless water be added.

I have been melting candied honey and was just thinking how nice the double tin hive for Queen hatching would be for this purpose.

R. WILKIN, Cadiz, O.

Thanks for the idea; by having a molasses gate attached to one corner, candied honey could be "jarred," quite expeditiously and the even temperature, that cannot exceed boiling water could not possibly injure the color nor flavor of the honey.

Heads of Grain,

FROM DIFFERENT FIELDS.

MR. A. ROOT: SIR:——Since June last I have been a constant reader of the *A. B. J.* and am so well pleased with your way of talking on Bee-topics that I have long felt an inclination to write to you on the subject, but when I read in the Nov. No. that you had more friends than you *desired* I concluded to wait a while. A few days before Christmas the Dec. No. came and in a few minutes I had your explanation. Now that the holidays are over and I have entirely recovered from the effects of the gayeties thereof, I write, and if I prove tedious please charge it to my interest in and love for Bee-keeping.

Permit me to indulge in a little personal history for I love to tell what a great benefit this business has been to me. My habits were sedentary and in the spring of '71 my life seemed only a question of time' and a very short space of time; but it was not so, for I took the advice of a sensible Physician who prescribed "little medicine, generous diet, plenty of sleep, and an *interesting light out-of-door occupation*." I engaged in Bee-keeping with my Brother who did all the hard work but in the Winter of '72 he moved away since which time I have had to "row my own boat" with not even a sister to suggest and assist as "Nellie" does "Cyula." My Father is an old farmer and will *not* look at Bee-keeping through my spectacles. I never owned many colonies; *lost* four ninths during the winter and spring of '73, the remaining five ninths were very weak, I learned a lesson there.

Although the past season seems to have been quite unfavorable I have no idea of retiring from the Apiary but hope for better seasons and intend making an honest effort to make this business remunerative this year; and think it necessary to have an extractor. Brother and I used the Melipult—of course I do not want it—I have seen two cylinder machines but it seems to me they were both unnecessarily heavy and inconveniently large. Tell me in what particular your $6 & $10 machines differ. I want a good durable machine but the leanness of my portemonnaie forbids my buying ornamental things, well as I like them. Do you consider diluted honey objectional as spring feed?

An Interested Bee-keeper.

Hendersonville, Tenn.

Our friend is not the only one who feels she is much indebted to bees for a longer lease of life, and also for having given a new zest to the pleasure of living. Our cheap Extractor is the same as the other excepting the outside can which is neither as convenient nor durable. We know of no objection to feeding honey in the spring except want of economy, when sugar is so much cheaper.

Yes, I want GLEANINGS of course, would not be willing to do without it. I have all the Numbers published in a little book now with index, and I must say, that, among all the back Nos. of the four Bee Journals I am taking and all the books I have on the subject, there is not to be found so much useful matter in so small a compass as in GLEANINGS.

I have been keeping from 50 to 60 swarms of Bees here for the past four years, and have lost over half each winter on the average, but at this date every swarm is lively and seems perfectly healthy under the straw mats on summer stands. I have never used the mats before this winter.

I believe the merits of catnip as a honey producing plant have not as yet been fully appreciated, particularly if it is grown on good ground and cultivated. I cultivated a small patch in my garden last summer and my bees were swarming on it from the 25th of June to the middle of Sept. almost three months, and there was not a day during the whole time so stormy that they were not on it some portion of the day. I have raised plants the past season to cover nearly an acre, which I shall transplant and cultivate carefully. I have sowed a large amount of the seed on waste places about for two years, but the bees do not take to it any thing like they do where it is on better ground and cultivated. Will try to give you some results next season. It is my opinion that the catnip will out do Linden altogether coming as it does and lasting through the whole season of scarcity. Quinby says: "If there is any one article I would cultivate exclusively for honey it would be Catnip."

M. NEVINS, Cheviot, O.

Give us the results of the "Catnip plantation" by all means. Even if a failure you should have the hearty thanks of all Bee-keepers. We are very much inclined to agree with Gallup that a brisk growth brought about by cultivation or other causes is almost essential to the secretion of honey, and with the catnip if we are correct our only hope of making the project pay is the honey it produces.

DEAR NOVICE:—As I have been dabbling a little with bees for many years, and reading the *A. B. J.* for two years, to see who was the biggest fool, and could get up the most complicated intricate and difficult bee hive and moth cage, and as they are still getting new patents I fear I shall never see the end, so I have concluded that one practical man (If he be a Novice) is better to consult than a host of theorists; so I have concluded to try Novice.

B. T. TALBOT, Viola, Iowa.

We have experimented considerably, and find Adair's drone trap to be worthless; his close fitting section hive an intolerable nuisance, and find that his new idea hive will not do what is claimed for it. It will not prevent the building of drone comb, and is enough to wear the patience of Job, to handle the frames frequently; besides it is too revolting to humanity to be compelled to brutally murder our innocent pets: and altogether too barbarous to be tolerated at all in this enlightened age.

Dr. E. C. LARCH, Ashland, Mo.

The above, although seemingly harsh is a very fair illustration of the practicability of many of the patented appliances for Bee Culture. It may be however that Adair has a knack of handling them himself more successfully, but we cannot think he works a very large Apiary with Section Hives.

Apropos of Problem 19th, has the following fact any significance? My queenless colony raised hundreds of little drones during November, which month with us was colder, more wintry than December. The cells in which said little drones were reared had not been lengthened—were capped over like worker brood. It is reasonable to suppose, therefore, that genuine worker brood would, *under the same circumstances* have received the same care.

May it not be then, that by removing the queen, after securing a supply of eggs, (I suppose a plan might be devised for keeping her safely a few weeks,) the rearing of a limited quantity of brood (or an unlimited quantity, if eggs can be obtained,) can be *at any time ensured?* L. A. W.

We have often noticed how carefully eggs and larvæ were nursed in a queenless colony, but are not prepared to say from practical experiment that *more* young bees would be raised. Those having queenless colonies this spring (see Dec. No. page 90) will be pretty sure to test the matter and we hope will report.

I see that Bee men are not yet satisfied as to dysentery or bee disease, and I never was till this winter and now I *know* the cause, found the cause *accidentally* and not by smartness.

I put all but 7 in the cellar second day after the cold weather, and the 7 several days after it turned cold so they had been exposed and were *gorged* with honey, and being confined were not able to empty themselves. and the result *dysentery* or *bee disease*, the 7 are now all dead, while the remaining 85 are good and all right. I would willingly wager 50 hives against 50 that I can produce the disease in any hive by exposing to a severe cold snap say a week, mercury some times down to zero or below, then if the weather turns favorable for flying, prevent by putting in cellar or bee house and expose again, perhaps once will do.

D. D. Palmer, Eliza, Ills.

We are sorry to dampen our friend's enthusiasm but he forgets like many others that the same thing has been done hundreds of times without injury, again, perhaps the worst cases of loss were in Feb. and March or even April, where the bees were left out and not moved at all. Precisely the treatment he mentions does not give our sugar fed colonies the disease. He further adds some heavy questions for a Novice to answer but we'll try.

A few questions for Gleanings.

1st.—When bees are gathering honey or pollen do they gather from one or more species of plants?

2nd.—Have drones ever been known to mate with a drone of a fertile worker or an unimpregnated queen?

3rd.—Why do bees build their combs corragated or wavy?

4th.—Will Queen cells do as well in a horizontal position as perpendicular after being capped?

5th.—Do the bees leave the cocoons in the cells?

6th.—Can bees hear?

1st.—Usually one, but we find many exceptions.

2nd.—A number of direct experiments seem to indicate the small drones good, but others stoutly contend they are not.

3rd.—We think generally because the colony is weak. When the colony is strong and hive "chock" full of bees, combs are generally strait and regular.

4th.—We think so but may be wrong-

5th.—You may see by dissolving the comb in hot water.

6th.—Mrs. N. says they can, for they always come to the pump in dry weather when they hear it going.

What is the size of the perforated tin you use on your tea-kettle feeder, what is the *number*, how fine. answer in Gleanings.

F. W. Chapman, Morrison, Ills.

About 17 holes to the inch each way, are found in the perforated tin we use, but we rather think larger holes would be less liable to fill up with sugar, however a tea-kettle of hot water cleans them quickly. Some one proposes to make these feeders of boards made tight with wax; these will do very well one season but after that, make much trouble by leakage, while tin although a little more expensive, lasts indefinitely.

Light Wanted:—I have been trying to make some bee-quilts and can not make them to suit, they get so puckered up that they will not lie down square, we tried to quilt them with a machine, please instruct us by letter. Albert Potter, Eureka, Wis.

Don't quilt them. Make them just like a pillow case and have them rather large; have the sides of the hive come at least a half inch above the top of the frames and then tuck them in tight every time so not a bee can even make faces at you before the hive is closed.

If it be not necessary for Polish bees to fly for purification for a period of eight or nine months, why will not our bees remain quiet and healthful when confined for half the time?

Would you not like frames 14 inches long, (instead of 17 ¼,) provided you could fill a hive with them of same capacity at same expense, better than you do your present style of frames?

Is there not too much *weight* of comb and honey in your 8 ¾ by 17 ¼ inch frames, to handle in the extractor safely? Very truly,

G. E. Carlin, M. D. St. Johns, Mich.

We know bees used to stand a low degree of cold for months in northern climates and really cannot see why they should not stand our winters for the last few years.

We feel quite certain *we* can raise more brood in the shallow Langstroth frame than in any deeper one and we find them also *best* adapted to the extractor after having tried all those given on our circular except the Adair frame.

Much depends however on having a very tight hive; the movable side, in our American hives always lets in so much cold air, as they always must do, that, perhaps our experiments with deep frames were defective in that respect.

Friend Novice:—We fellow Novices would like to know if the honey flies above the comb in using them end downward in the extractor, and does it take less force to throw it out that way, than it would if hung as it is in the hive? With the extractor I use, the honey flies up six inches or more when thick and cool.

R. S. Becktell, New Buffalo, Mich.

If the frames revolve one inch lower than the top of the can we cannot imagine how the honey can fly out. With the frame longest way up and down, no part of the comb need exceed 6 inches from the central shaft, consequently we have less centrifugal force, the machine may be lighter, less power is required to stop and start, and we work easier and faster.

Can I keep bees *successfully* in the *heart* of a City, or will they interfere with Grocery and Confectionery shops, that are near?

Stephen Williams, Nashua, N. H.

Yes. When there are no natural stores to be had, keep them busy on sugar as we do, and if you think you cannot afford the sugar, make them pay for it by rearing $1.00 Queens.

OUR, "Latest Intelligence" CORNER

Questions not too lengthy, may be answered through this department even if not received until within two days, of the first of the month; and in two days more, nothing preventing, you may have your paper containing the reply. If our friends would use a separate piece of paper for this, and in fact for each of the departments, and write on one side only t'would be quite a favor, but if it's too much trouble, don't do it, for we want to hear from you any way.

HERE we are once more, this 27th day of Feb. 1874, and Bee Culture stands about as follows:—No positive case of the dreaded malady has yet been reported; unusually favorable reports come from all quarters, both in regard to out, and in door wintering.

Bee Keepers Mag. for Feb., we noticed last month.

WE would suggest to Adair the propriety of returning the money sent him for his Dec. Annals. *Three months* behind time can hardly be considered excusable.

ALTHOUGH *Mrs, Tupper's Journal* for *Feb.* did not come to hand until the 26th, she presents us one of the most valuable Nos. yet issued.

THE *A. B. J.* made its appearance on the 9th, with an unusually fine selection of valuable articles. Both in typography and arrangement, it is not only a credit to our branch of industry, but to AMERICAN JOURNALISM as well.

THE *Bee World* for *Feb.* made its appearance on the 25th. Its typography is somewhat improved, and Mr. Moon seems to have a fine corps of contributors; but for *mercy's sake*, why does he not get some one to read his proof. If the man can neither read, write, nor spell, himself, he certainly should not leave his readers to infer that no one in *Rome, Ga.*, can do any better. Among all the host of transient Periodicals with which our country is now flooded we have never before seen any thing so lamentably deficient in the principles which any common school education should give, as Mr. M's attempts at editorials. We say this with no ill feeling toward Mr. M. but on the contrary would be much pleased to add to our list of Bee Periodicals, one published in the South.

◆

ON page 220 of *A. B. J.* for 1870, J. L. Davis writes: "But I do say that I can raise Queens for $1.00 apiece if taken as soon as fertile," by which it appears we were not the first to suggest the idea.

SEVERAL complain that their Italians look like hybrids in the winter; we think this only owing to the faded colors of the old bees, and that when the young bees get out, their markings will be equally as fair as last season, unless the Queen has been superceded.

INSTEAD of the long arguments, as to who is right, and who is wrong on wintering, would it not be as well to watch and see who is most uniformly successful? Those who perfectly understand it should winter, aye, and "spring too," without loss. We hope all will be as faithful in reporting losses as successes.

N. C. MITCHELL, writes to ask our readers to defer concluding him really untrustworthy until May or June, when he will make good all promises. He also insists, Moon is much the *worse* man of the two, yet we have let *him* go "scott free"; to which we reply that Moon has done nothing, so far as we know, whereby the *good of community* requires he should be "shown up"; unless it be, forsooth, his *murdering of the English Language.*

(*Continued from page* 26.)

Our reason for putting the Quinby frame last, was mainly on account of its size, and as there must be a stopping place some where, we had concluded that about the capacity of the L. frame was enough. Our objection to the American frame in *A. B. J.* was written while using the old style with cross bar in the middle, and of a depth of 15 inches or more; when made 12 by 12 they can be readily used in a tight hive like the L. without a movable side. Yours were probably the old movable side American hives, and perhaps this was somewhat the reason for the lack of brood. It is our impression you could have done nearly, if not quite as well, with the L. hive. We agree with you perfectly in regard to the Queen's dislike to enlarging the brood nest downward. Being enabled to use 8 combs instead of 10, would be with us a heavy argument in favor of the large frames, and were we to handle them personally, without expecting any aid from feminines and juveniles, we might give it a preference. In our attempts to get the bees to work in boxes, we have for two seasons had illustrations of heavy Q. frames that were enough to intimidate a good sized child.

In regard to the divisible frames; we made similar ones two years ago, and formed a plan of having the hive so narrow, that with rabbets clear around, we could put in the small frames cross wise, and the whole ones length wise, thus securing the advantages of the Gallup hive for Queen-rearing etc., and the Quinby hive for honey. After getting over our first enthusiasm on the idea, we concluded the advantages were not sufficient to compensate for the complication rendered necessary for a divisible frame; and so we turned back to our old Langstroth frame again, as we have many times before, satisfied it was nearest the desideratum, *all* things considered.

THE long, one story hives had better be made with a permanent bottom board "let in" like the cover, for it will be found quite difficult to make them tight otherwise, in so long a hive; besides as they are not to be used two story, there is no especial need of a loose bottom. Further directions next month.

WE have 13 colonies under as many manure heaps, (now covered deep with snow also) with the south side of the hive exposed, in such a way that they can fly, at any glimpse of sunshine, ad libitum, and yet the manure affords so much protection that we think water would not freeze, under the same conditions, during the most severe winter weather. Is it possible that we have at last a plan of wintering our bees on their summer stands without exposing them to a freezing temperature? This would chime with the broad one story hives nicely.

WERE we to judge of the value of Conventions by the excellent addresses of Prof. Cook, and M. Quinby, given respectively in *A. B. J.* for Feb. and *Utica Morning Herald* of Feb. 5th, we should have no doubt of their great utility. The Convention at Utica, furnishes a great number of practical facts, and much credit is due them for their concluding summing up of the report in a tabular form; but why does it not embody also, the yield of Capt. Hetherington's large apiary? Attend Conventions by all means, when you can do so without making the *expense* of the Apiary, on an average, overbalance the total receipts.

Will the kind friend who sent us the above papers accept our earnest thanks for the same.

GET your bees to working on the meal now as speedily as possible. Exercise your ingenuity in securing a place for it *in the sun*, but out of the wind, rain and snow. A mixture of grains seems to please them best; we have just had ground up finely together, one bushel of rye, two of oats, and one of wheat screenings composed largely of chess. For economy in using it we would put it on a level platform large enough to afford a foot square for each stock. But little attention will be paid to the meal after they get natural pollen.

I have 40 stands of bees, (Italians) use the Gallup frame—bees in good order—have several "New Idea Hives," did well last year—*rather large*—think I prefer 21 frame hive to 32—my long hives did better last year than the standard or 12 frame hive—began last spring with 20 stands, purchased them mostly of Gallup—all Italians—season poor—basswood failed, sold less than 300 lbs.—put the hives into cellar, all but ten of the largest—and prepared them for winter according to Gallup's mode. I think that I will make some of your form of hives this spring—if for nothing else I like them on account of there being no waste material. Name lost.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions: No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delays as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

J. Shaw & Son, Chatham Center, Medina Co., Ohio.
I. E. Daniels, Lodi, " " "
G. W. Dean, River Styx, " " "
E. C. Blakeslee, Medina, " " "
Willis J. Phelps, " " " "
W. J. Hosmer, Janesville, Minnesota.
John L. Davis, Holt, Mich.
James A. Buchanan, Wintersville, Jeff. Co., O.
Dr. J. P. H. Brown, Augusta, Georgia.
Miss. Annie Saunders, Woodville, Miss.
W. J. Standefer, Dry Grove, Hinds Co., Miss.
W. D. Wright, Knowersville, Albany Co., N. Y.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

Geo. T. Wheeler, Mexico, N. Y.
G. W. Dean, River Styx, Medina Co., O.

Business & Personal.

Apiarist Wanted; S. W. Greisinger, Carlisle, Pa.

And "Lyons," care W. W. Barnum, Southport, Ind. wants a place; can make hives or handle bees. Also: Situation wanted; but we have lost the applicants name, as we have also the names of several who had empty combs for sale, etc., but if you'll send your names with the respective "ten centses" we'll submit the whole matter to our readers. Advertisers should remember that GLEANINGS is *so small* every word is usually read.

WE are pleased to note that Mr. Quinby offers empty comb for sale. At the price he has fixed—50c. for Quinby frames of *worker* comb—we think they should go off rapidly. Those having empty comb in any of the standard frames, we think would find a ready sale for them by advertising. His new smoker it seems to us would be cumbrous; 'tis worked with a little bellows.

There are a few things in Mr. Q's circular that we cannot help protesting against. For instance;

> "In consequence of the advantage which this hive enables us to take of the labors of the bees, by preventing their swarming, &c., it is safe in a good season to calculate on an average of one or two hundred pounds of box honey, or two or three hundred when the combs are emptied with a machine—which will sell for more in one season than the price of colony."

This has appeared in his circular we believe for three years, yet if any Bee-keeper in the U. S. has ever made an apiary of 50 or even 25 hives give such a result *on an average* we should be pleased to hear of it. We wrote Mr. Q. when we first saw his circular containing the statement, asking him if it was wise to put it so high; even his own apiary since then, so far as we can gather, has given an average of considerably less than 100 lbs. either box or ext'd honey. Should the hive have a great advantage over those in common use for box honey, we can hardly think even Mr. Q. *himself* intends to intimate, *his hive* has any especial advantage for extracted, yet it seems to read so; it consists when arranged for the latter, simply of 16 Quinby frames arranged horizontally with the entrance midway at the ends of the frames.

The new swarming arrangment can of course be applied as well to any hive that affords them room to work, but we believe it is now pretty generally conceded that a faithful use of the extractor alone, rarely fails to prevent an attempt at swarming, rendering the queen yard useless for any but box honey.

Is it well to hold out to beginners a statement like the above? 'tis almost sure to end in "blasted hopes." Would it not be better to estimate 50 lbs. on an average? then if they did better than that there would be no feeling that they had been humbugged by having false hopes held out to them. Again:

> "In giving this hive to the public, it is not with the idea of making it pecuniarily profitable. It is designed for our own special use and advantage in connection with this system of management. But being willing that any person who might wish to give it a trial, without subjecting us to the trouble of giving a detailed description of it, should have the privilege, we have given it publicity, and we will furnish the hive as a sample to work from, cheaper than to give a full description, with measurements, &c., which we cannot do."

Has he ever considered that as the hive itself is only a plain simple box, full directions could be published in the circular, or even given in the Journals at the trifling expense, to him, of making the measurements, and descriptions *once*. As his price for the empty hive with one box and Queen yard, is $8.00, and they can easily be made for $4.00, it looks as if there must be a "pecuniary profit" somewhere. Such cumbrous hives should certainly be made near home to save the great expense of shipping; almost every neighborhood of Bee-keepers now affords some one who can make good hives, at a moderate price. The express charges, (Mr. Q. recommends sending them *only* by express) on such a hive is really "fearful," as many of our friends in the Western States can testify. Aside from the glass in the honey boxes, there can be no trouble whatever in sending the hives safely as freight, if a little extra time and expense be used in crating them.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,
BY A. I. ROOT & CO.

Vol. II APRIL, 1874. No. 4

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

[*Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.*]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to Conduct an Apiary.....37
Can we agree on a STANDARD FRAME.....38
Can we agree on a STANDARD HIVE.....38
Abreviations in Bee Correspondence.....40
Raising Bees in a "hot bed".....40, 41
Our Own Apiary.....40
Strong Colonies.....41
Swarming Out.....41
A House for Meal Feeding.....42
Rye and Oats Preferred by the Bees.....42
Foot power Buzz saw, for Hive making.....42
Depository of Blasted Hopes.....44
Reports Encouraging.....46
How to Make a Wax Extractor.....44
Humbugs and Swindles.....47

Page.
A Short Chapter on Poultry etc.....45
Heads of Grain.....47
About *Us*.....42, 46
Honey Column.....43
Introduction of virgin Queens.....43
Changing Two Story to Horizontal Hives.....43
Review of the Bee Journals.....42
Bee Journals and Punctuality.....42
Concerning Problem No. 20.....44
Shall We Build Combs or buy them?.....44
Wintering.....41
$1.00 Queens.....Back Cover.
Who will rear Queens in the South " "
Single story versus Two story.....38, 39
Quinby's Non Swarming Hive.....42

KIND FRIENDS:—'Tis our intention to use the inside of the cover for advertisements *when we get 'em.* Until we do, we'll try and gossip a little with our readers on some topic of so little value that 'twill not be worth while to preserve it when you strip off the covers preparatory to binding.

EXTRACTORS seem to be one of the principal topics of the day, and we get many letters like the following:

> Unfortunately like many others, I have not more than two hives alike and consequently the frames are all different sizes; two hives, frames 15 inches wide and 12 deep; 1, 15½ wide, 13¼ deep; 1, 16 wide, and 14 deep; two 10 wide, and 11 deep; now what I want especially to know is, if with an Ext. for the L. frame you can extract the honey from all my frames mentioned above, or whether you can only use one sized frame, if so it would not be worth while to get an extractor till I get all my bees on frames of uniform dimensions, which I mean to do as soon as possible. Also, I want to know if you sell the Metal Corners for the top of the frames without the bottom corners, or otherwise.
>
> The GLEANINGS come most punctually, always ahead of every thing else, but never too soon.
>
> How can you tell at this season if a colony is Queenless?
>
> Excuse this hurried communication.
>
> Yours truly, JOHN McMURDO,
> Stromness, Ontario, March 13th, 1874.

We can make Ext'rs, and do at the same price, that will take in any sized frame, but the owner is then obliged to expend considerable strength and time uselessly.

For instance a very large, strong frame must be made to extract one of the Quinby combs, and we are obliged to work slower on account of the extra weight of every thing; yet as there are only eight combs in the hive, we can get along about as fast after all. Again a very light small frame will answer for the Gallup combs, and we can handle them so quickly that we get along nearly as fast if there are *twelve* combs to be handled instead of eight.

So far, so well, but suppose we should undertake to use a Quinby Ext'r for a Gallup comb? do you not see the inconsistency? Now our friend mentions a comb 16 x 14, this is *still* worse, for the Ext'r frames would have to be made at least 14½ inches wide to take this comb in, and perhaps 18 inches long to take in some other one, and to whirl all of this, get it up to speed, start and stop it quickly, for a *small comb*, would be too much like a boy of half a dozen summers trying to run a foot-race with his fathers boots on.

In ordering an Ext'r always give us the size of the comb or combs you wish to use. If you have but few hives of odd sizes you had better cut them down to one sized frame if possible. We always make the Ext'r frame ½ inch wider than the comb, and where the frames are long, the wire cloth may just as well be two inches *shorter* than the comb, allowing the latter to project one inch above and one below, this is perfectly safe and allows the machinery to be made lighter.

We can furnish the top corners alone if desired, at $1.25 per hundred, if sent by mail 25c. additional.

We omitted mentioning them alone, on our price list because 'tis impossible to make a nice light frame without the lower ones also; for such strips as make a substantial frame with the corners, could not possibly be nailed or fastened at the bottom securely, in any other way that we know of. We have purposely kept all mention of the corners out of print, preferring that they should make their own way into general use; this they are now doing at a rate quite satisfactory to us.

We shall try to mail GLEANINGS without fail, early enough so that we may reasonably expect it to be in the hands of our readers promptly, by the first of each month.

> ONE letter I have says, "Novice tells how to make one" (extractor) "but they are like his dollar hives, it takes two to make one, and no frames at that, his extractors are a simple can that sits on the floor, no frame to hold it, or knife to uncap with, in *fact it's too cheap*, good as far as it goes,—it wants *finishing*." There you've got it, so solve our problems.
>
> We like GLEANINGS very much, only don't like advertisements on the *pages* of a book worth binding, and would like an index separate from your circular to bind with it.
>
> Success to the "wind-mill print."
>
> New Orleans, La. JAS. H. YOUNG,

Just exactly. Were we to make a bench for our Ext'r to stand on, that would be just right to allow the molasses gate to stand over the bung hole of a barrel, as it should be, it would be an awkward thing to ship, and most of all, our friends would have to pay more freight or express charges on it, than would pay for making a good *permanent* one just where it is to be used. We always endeavor to consider our customers pockets as well as our own.

As very many of our customers had purchased a knife before we sold Ext'rs, we have thought best to fix the price without knives; of what use more than one knife is, in the Apiary we never could tell. P. G. never uses more than one, although we have dozens of them on hand.

'Tis true our machines might look better if painted, but if they were our patrons would have to pay for it, and we cannot really see

Continued on back cover.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY.

Vol. II. APRIL 1, 1874. No. IV

HOW TO CONDUCT AN APIARY.

No. 4.

AFTER the many hints given last month in regard to tidiness etc., and then to go and cover our own hives up with stable manure may look a little inconsistent; it might well be said of us as of some physicians, that they resemble sign posts, inasmuch as "they point the way for others, but go not." Well, the truth is kind friends, we did not dare advise all to do as we have, until we had well tried the plan, any more than we dared three years ago to advise all to sell their honey at 20c. and winter their bees on syrup at a cost of 08c., yet we should by all means advise the the latter now. 'Tis now March 11th, and we have had some very cold rough weather that has made us many times thankful our bees were even warmer than they would have been in the house; besides, the manure when washed by the rain and dried in the sun is not so very untidy after all. It covers the ground so as to make a clean soft carpet to walk on, while the uncovered clay soil is a most unpleasant foot hold through the combined effects of sun and frost. We shall probably leave much of the covering around the hives until May, for usually many sudden cold changes occur with us, between now and that time.

Strong colonies can probably have a comb put in the middle of the cluster advantageously during this month, but the plan of taking brood from them to build up weak ones, we regard as more of a damage to the strong one, than benefit to the weak, although such a course may be best to save Queens of extra value. When you take a comb out of the centre of the cluster, you often take the best half of the brood, and sometimes nearly all the pollen, and the weak stock may be able to prevent only a small part of the brood from perishing. Get every colony as quickly as possible into a condition of things whereby they will be self sustaining, and to do this we know of nothing equal to the meal feed; and we know of no pleasanter or more enticing work about the apiary than getting them briskly at work on the meal. The heaviest crop of honey we ever had was when we induced them to take in most rye meal in March. We are in some doubt if even natural pollen gives brood-rearing the impetus the flour does. Several patent feeders have been claimed to have the property of inducing the bees to take the meal in the hive, but as we have entirely failed with such contrivances, as have all we have conversed with on the subject, we think they may be safely classed with humbugs and swindles. We have never been able to induce them to take any substitute for pollen even when placed in a comb next the brood; the act of flying out and gathering it on the wing, seems to be absolutely a necessity.

The plan advanced of keeping the bees housed during this month or until flowers are in bloom, it seems to us would be decidedly an error. We think modern Bee Culture demands that we proceed to get the hives full of bees as speedily as possible.

If they can get up a large force to work on apple blossoms they will be prepared to send out an army of young bees when the clover appears. That colonies may catch up and do fairly even when so kept back in brood-rearing is quite probable, but our largest yields have invariably been from those that commenced brood-rearing quite early. In our opinion the crop of clover honey is very much dependant upon the start the bees get during the month of April. Who can report a colony having brood in every comb in the hive during this month?

See your bees often, and please excuse us if we say it "often." Some day when you feel like taking a little rest, take the hives one by one and observe whether each one carries in pollen or meal at a fair rate; if it don't, see what the trouble is. If queenless, give it eggs twice a week from some stronger stock on the plan given on page 90 Dec. No. of Vol. 1, until they can rear a queen of their own. Any good queen can during this month furnish three or four times as many eggs probably, as her bees can care for, therefore if we can remove eggs only, we are not injuring the colony, and are furnishing the weak ones all the help they require.

Colonies with old or unprolific queens, can be treated in the same way. Before you object because this is too much trouble, consider that 'twould be time very well invested indeed if you could induce your weakest stock to do as well as your best. Almost every one has colonies that occasionally give a great result. Now this is too much luck and chance; we should be sufficiently skillful to make our entire Apiary give a great result, perhaps not two or three hundred lbs. to the hive, but half that for instance, from 50 colonies would make a "big stir" in almost any neighborhood.

The best we have ever done was an average of 131 lbs. per hive, from 47 colonies, yet we have had a fair paying crop *every* year; even the past one of 1873, with only a yield of honey for barely 10 days, gave us average of about 35 lbs. from 57 colonies, which paid for all care, and a comfortable percentage on the amount of capital invested besides.

◆

THE STANDARD HIVE AND FRAME.

STRANGE it is, but scarcely a new thing comes up in bee culture, but that if we examine carefully, we will find somewhere a record of where our old friend Langstroth has been over the same ground before us. Even now we have just called to mind a pleasant correspondence that passed between us just before the time of our mutual friend Wagner's death when Mr. L. was in Washington. The correspondence originated from sending Mr. L. one of our new frames. We were then considering a 12 x 12 frame. We extract from different letters as follows:

Washington, Apr. 4th, 1872.

DEAR FRIEND:—I hope you will try the 12 x 12—but I have years ago tried such frames and do *not* like them—too much cost to make, handle, etc. I think the hive 14 x 14 and 13 deep much better, and shall probably adopt that shape, as the honey emptier and side boxes make it no longer so desirable to have a shallow hive.

April 5th, You will see from my last that I propose to change the dimensions of my frame, perhaps there will not be much to choose between the hive 14 x 14 x 13 and 12 x 12 x 12, but I prefer the first, I much prefer ten frames to 12.

Here comes a reply to some queries of ours in regard to the Simplicity hive which then "filled our head;" also as to confining the bees to a single story and using the Ext. on friend Dean's plan, see page 55, Vol. 1.

If you refer to Fig. (1) P. 20, (my book) you will see that I used an open box. Try some on this new plan, but let me strongly caution you not to go into it largely. You will never like the movable B. B. you will find it an intolerable nuisance, there is not time to go into the reasons, but you will find I am right. Under some circumstances perhaps as much could be emptied from a single, as from a double hive, but it *cuts too close.* Too little room room for brood, we want the bees to get the set of frames pretty well filled with the sealed honey—not safe to go on any other plan, their own first, unless we take about all of the best and replace with sugar syrup, this may pay with present prices.

April 10th.—By carefully calculating the difference between 12 x 12 x 12, and 14 x 14 x 13, I find that *ten* frames of the latter sized hive, will have *nearly* as much comb surface as *thirteen* of the former. Now take into fair account the extra *cost* and *time* of handling, the fact that in poor seasons the more frames, the more the honey is scattered etc., and I feel sure you will *not* adopt the smaller size. I hope that you will make one hive of my new size.

April 23rd.—I know that you and those with you, can not only *bear* plain criticism but *desire* it. Let me remind you how apt we are to let an idea run away with us. When we get a good thing we are almost sure to run some parts of it into the ground; it seems to me that you are in danger of doing this in two things, the one I have just mentioned, and the dispensing with the fixed bottom board. When you have fairly worked it out, summered it and wintered it, I feel very confident that you will come to the conclusion I reached 20 years ago. While you try it in your Apiary, let me advise you not to recommend it to the public, until you have put it to the test in your own Apiary. I think our leading Apiarians should be very chary of recommending what they have not *tested;* often, *suggestions* from such parties, lead to rash adoption of them, and serious injury to non-experts. When I was most largely engaged in experimenting, I found it to be a good plan to give my notions to friends, that together we might work them out. They having no paternal interest in the notions, are more likely perhaps than myself, to see in them only *conceits.* But enough of this, I hope that you will understand what I am aiming at.

L. L. LANGSTROTH,

It seems to us that we have scarcely a reader who can fail to see the rare good sense that shines in every line of the above.

After reading it again, we have the same feeling that we had two years ago; that we were utterly incompetent to advise in regard to a hive that will be best, all things considered, for the coming generation of Bee Keepers. Of one thing we are sure however, and that is, that the plainer and simpler it is, the better. That the Simplicity hive will give equally as good yields of honey as the more complicated and costly hives has been abundantly proven, and were we going to use a two story hive we should most assuredly use a movable bottom board, and precisely the hive we advised last season. In regard to the size of the frame, it seems our friend Langstroth had anticipated as usual, the fact that a different shape might be better when we considered a hive suitable for the Ext. only, and the dimensions of a frame for the hive he suggests would be very nearly the one we are now talking of for a Standard.

Now we have ample evidence that as much honey can be secured with frames a little deeper, spread horizontally; and the advantages of such a hive for the extractor are too obvious to need mention. We believe we have only then to consider the subject of wintering; one plan that will certainly answer is given by friend Palmer, page 29, and another is our present "hobby" of the stable manure.

That a few inches of chaff, straw, or old clothing, around a hive is no positive protection, we think is *generally* admitted, and unless we can give a colony a place that will keep fruit or potatoes from freezing, they had much better be on their summer stands. We wish some one who has had a positive experience in the matter would tell us how much manure would have to be heaped over a bushel of potatoes, heaped up directly on the ground, to keep them from freezing. Such a place, and such a temperature, from what we can gather from many experiments, reported from different points, would seem to be most desirable for bees to winter.

Having an entrance continually open on the south side would tend to make the bees colder than the potatoes, but on the other hand we have their own animal heat, to balance this disadvantage. A covering of earth would do of course, if thick enough to prevent frost penetrating, but having no source of heat within itself like the manure, and being so heavy to handle we must consider it out of the question. From what experience we have had we would feel safe to risk the bees under, half a wagon load to each hive; we would feed them meal at any time during the winter should opportunity offer.

It has been often objected, that they would fly out and get lost during unseasonable weather, to which we answer, they have as yet done nothing of the kind. They sometimes come to the entrance and look out, as much as to say "aint we nice in here?" and again they tip their heads on one side to observe the sun and clouds seemingly, but don't go out unless the weather is such they can readily get back. Remember no breath of wind touches them whatever may be its force or temperature.

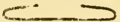
As we have had our "say," we will now try and tell what hive we would advise, were a beginner to tell us as many have done, "Novice, I am just commencing and wish to commence right. What shall I use for a Bee Hive; all things taken into consideration up to the present time, what would you advise?"

Now it is with *very much* hesitation we answer in favor of the Adair frame in place of our time honored Langstroth standard, and one great reason we have for so doing, is that the hive for it can all be made of boards of a single and moderate width, also considering that the hive will never be used two story.

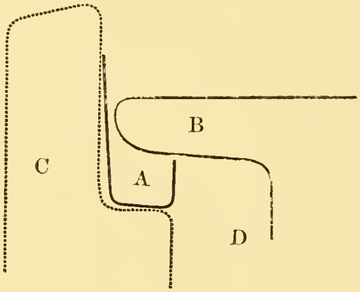
In practice 'tis found that we do not need quite, 1½ inches to the frame but that 20 frames work very conveniently in a hive 28¼ inches long inside, or 30 inches outside measure, as described on pages 23, 28 and 35, present Vol. With a permanent bottom board, we believe we would prefer the Langstroth blocks for closing the entrance, to any thing we have yet used; and one principal reason is, that they always guide the bees quickly and surely home; whether they are laden with pollen or honey and in eager haste to unload and get more, whether they are tumbling in pell-mell at the approach of a thunder shower, or whether 'tis only the juvenile Italians wanting to get home after having tried and approved their wings for the first time.

Really, how slowly we get along to-night; if we don't come down to business we shall not get our Standard hive done at all. Well, we would prolong the bottom board in front about 3 inches, and would have the outer end beveled off on an inclined plain, that bees might crawl up readily from the ground when heavily laden. We make the front end-board narrow enough to leave a space the width of the hive, ⅞ inch wide for entrance. This entrance when open full width, will afford all the ventilation ever needed, for in our opinion the wire cloth arrangements for ventilation are next in uselessness to patent moth traps. The entrance blocks we would make triangular, 2½ x 7½ x 8; they are pushed *into* the entrance.

Before the hive is used we would have the bottom board thoroughly painted, and then would keep it from the ground only by ⅞ strips clear around underneath; bottom is "let in" the sides to exclude wet. We do this because 'tis warmer near the earth, and less manure will be needed to cover them in winter.

Now in regard to hinging on the cover; with a length of 30 inches, *three* hinges are really needed, one in the middle and one near each end, and as Simplicity hinges can only be used at the ends we fear we had better drop them entirely for the long hives, as there is no occasion for removing the covers at all. To those who would remonstrate at so many changes in our teachings, we have only to say that all real progress must be a series of tearing down and building up again, and if we give you on these pages, *real life*, it must come combined with imperfections, and error. Those who have L. frames or in fact any other, can make a hive on this plan to try it, and use the combs they have. Where the width of the frame necessitates using a cover greater in width than 16 inches, we would make it of two boards, and to make the joint water tight, *sure*, we simply saw in to the edge of both boards to the depth of about ⅜ of an inch, thus leaving, when the boards are placed close together, a groove in which we may slide a tongue, made by folding a strip of tin one inch wide, thus:  if water gets in as far as the tin, it can go no farther and if the crack is filled with paint, it—well, it's very good. A similar tongue made of wood is apt to check in time by shrinkage of the boards, which the tin cannot do. We have just made an L. hive to hold 30 frames with two joints in the cover and bottom made in this way; use the thinnest tin unless your saw cuts a very wide groove.

So many questions are asked about the metal rabbet, a place for it, bevel etc., that we give the following rude cut, explanatory. The rabbet A, is printed from a section of the tin rabbet itself, and in fact the whole diagram is printed from strips of tin bent up hastily. [We respectfully tender the idea to the craft free of charge.]



B, is the supporting arm of the frame resting on the edge of thin metal of A. For nailed frames, this arm should be dressed out very exact, for unless it is, the frame cannot hang true. We would also have the end sawed off to a sharp V shaped point where it strikes the back part of A, that the bees may have as little chance as possible to wax it fast. For this latter idea we are indebted to W. H. Shane, of Chatham Center, this Co. Our reason in fact for having a back part to the rabbet, is to get a smooth surface for the frame to strike on, and to avoid gumming; they are much less liable to attach it to tin than to wood.

The space under the arm at A, we have endeavored to have just large enough for a bee to "promenade" easily through; if they can't, they fill it with propolis. The tin is cut in strips 1¼ inches wide for the rabbets, the places where bent, and angles, can be taken from the drawing. C, represents a section of the ⅞ board with the place cut for the rabbet, ⅜ x 1⅛; we prefer this extra depth to give plenty of room to tuck down the quilt; the wood remaining, being just ½ inch in thickness. The bevel on which the cover shuts is just about what we prefer; for directions for cutting it exact, see March No. of Vol. 1.

It will be seen that we cut rabbet in C, square in, both ways, but the back of A, is slanted; this is to be sure to have the top edge of A, come tight against the wood, that nothing may get behind it, and to have the frames glide smoothly into their places when handled rapidly. We would give each frame about 1-16 end shake, having space D, between hive and frame, never less than ¼ nor more than ½ inch.

ABBREVIATIONS IN BEE CORRESPONDENCE.

WITHOUT question, it is of the utmost importance that every aid be given to facilitate interchange of thought and experiment, among the devotees of our present stage of advanced Bee-culture, and as almost every mail gives us evidence of some one having developed some particular feature, it is of great importance that those working in the same direction, exploring an unexplored region as it were, be put in communication with each other.

As an illustration, friend Wilkin of Cadiz. O. sends us a sketch of a plan for a floating Apiary to traverse our Western and Southern rivers, and in a few days, we think it was friend Klum, of Sherman, Texas, who desired our opinion of a similar plan; of course we endeavored to induce the two to open a correspondence. Now is it not plain that by far the greatest good will accrue to the greater number by giving the full P. O. address of each correspondent? Such is at least the view we shall take of the matter notwithstanding the fact that by thus giving our friends publicity they may be annoyed by circulars of all sorts of humbugs and even *counterfeit money* propositions etc. If we cannot keep them too well informed to invest in such trash we shall consider our duties poorly discharged indeed.

Again, it has been said that the value of the advertising department is lessened by giving names in full, to which we reply, "be it so." When people are so well informed that there will be no need to *pay* for advertising, we will devote the space to some other purpose, for our purpose is to *inform* the people, not to keep them in the dark, and when we cannot get a liberal support for the former we will consider which is best, the latter, or the humilating admission that we have mistaken our calling.

Now for our plan, after so much of a preface, and we really hope you will hear us through before you object. Postal cards are a glorious aid to Bee-keepers, and we had rather have a postal card brief, plain, and to the point, than the most elaborate letter, always supposing the writer, if he can consistently will have his name and address plainly printed on one corner. If our friends could know of the annoyance caused us by carelessly written addresses, and having to guess at the probable State in which a town is located, we are sure they would be more careful. A postal card will not contain a very long letter 'tis true but by omitting all forms and pitching right into your subject at once, they will generally do; they had better be dated to avoid possible confusion but this can be done very briefly, and if your address is printed on it, even a signature may be omitted. In regard to privacy, should every one who can, read all postal cards pertaining to bee culture, we hope, he would be the better and wiser and *we* none the worse off.

Novice has quite a laborious correspondence to get over and as his right hand is not as good as the left, it must of a necessity be considerably condensed. When our letters come from the office they are first carefully examined, and postal cards addressed by P. G. to all those requiring answers; those containing orders, or items for publication are distributed to their respective departments. Now Novice many times finds the card rather small as some of our readers may have observed, and such long words as "extracted honey," "fertilization of Queens," etc., fill out a line before he is aware of it, and the thought has many times occurred that such frequent terms might be abbreviated in such a way as to be perfectly intelligible to Apiarists and yet take but little room, whether they should be plain to outsiders or not matters little, to us. In reading a letter from Mr. Harrison who was one of Mr. Wilkins employees last fall, we were struck with a system of the kind of their own, which we found perfectly intelligible, viz; using Q's, for Queens and h's, for hives.

We would suggest the following table of abbreviations to be used in correspondence or in writing for this Journal, as our compositors will of course understand it. We would advise all to punctuate, observe the proper use of capitals, and in fact to omit nothing that might lead to an erroneous reading of the item.

Queen,	Q.	Fertilization,	fzn.
Virgin Queen,	v. Q.	Bee Keeper,	bkr.
Bee,	b.	Brood,	bd.
Drone,	d.	Comb,	cm.
Hive,	hv.	Brood comb,	bdcm.
Honey,	hy.	Worker "	wcm.
Extractor,	xtr.	Drone "	dcm.
Ext'd Honey,	xtdhy.	Feeder,	fdr.
Extracting,	xtng.	Frame,	frm
Fertilize,	fz.	Pollen,	pln.
Fertilized	fzd.	Propolis,	pls.
Artificial,	artf.	Prolific,	plc.
Langstroth applied to Hives or frames,			L.
Quinby, " " " " "			Qy.
Gallup, " " " " "			G.
Standard, " " " " "			Std.
American Bee Journal,			*A. B. J.*
Bee Keepers Magazine,			*B. K. M.*
National Bee Journal,			*N. B. J.*

OUR OWN APIARY.

THE day being fine (March 1st,) our 13 colonies sallied out from beneath their respective manure heaps, and worked on the meal in a way that was highly gratifying, as we believe this is the earliest we have ever succeeded in getting them to take the meal. It was sprinkled on the summit of these same heaps to get them started. In the forenoon they worked on the south west side; at noon, on the south; and in the afternoon as the sun turned, nearly around to the west. The dark color of the manure causes the sun to warm it up quickly, aside from its own internal heat.

March 2nd,—We are so much pleased with the manure protection that we have put our entire 50 hives (all there is now) on their summer stands, and are making manure heaps over them as fast as possible. P. G. and Mrs. N. are decidedly of the opinion that the plan is any thing but neat and ornamental, whatever may be the effect on brood-rearing; and even little "Blue Eyes," (not quite 1½ years old) says "phfew," at the aroma given off in handling the steaming 18 *loads*, of the fermenting product of the stables. Perhaps we might as well admit that Novice has gone wild over the project, and declares he never wants to put bees in-doors again to winter. It will be remembered the lower bar of the trellis is one foot from the ground, and by setting the hive about six inches back from them we can build the manure from the hive to this bar, in such a way that the entrance of the hive is nearly a foot back in the heap; the sun shines in here but no rain nor wind can enter, and the bees will come out and bask in the sunshine, apparently as happy as kittens, during days that are too cool for them to fly.

March 3rd—To day we finished covering our whole 50 hives with the exception of the Quinby hive whose great size appals us; all strong ones except that, are working merrily on the meal.

March 4th—We must have our Quinby hive enjoy all the advantages of the rest, and so we have taken away the hive entirely except the bottom-board and frames; have covered the latter with shingles and were thus enabled to get them in shape to be covered nicely. As they occupy but a comparatively small compass in this way, we should consider it an excellent plan for wintering the Q. hive.

We have found but one case of real dysentery, and that is the hive that hung on the Spring Balance. At the time of feeding them they had more sealed stores than any of the rest, but owing to the position they occupied they had been passed by when we did the regular Ext'ng preparatory to feeding, and as our things were washed up we, "kind of concluded" that it must have been mostly gathered from the half barrel of dry sugar. Well, we to day cleaned out the hive, covered the frames with dry straw, put the cover over it loosely *a la* Muth, and covered them up with the rest.

March 14th—We have had just two weeks of bad weather, some of it extremely cold and wintry. As most of the bees are out again to day, we concluded to be out too, making examinations. Spring Balance colony is dead; frames, combs, and bottom-board badly soiled with the disagreeable excrement nearly as black as tar, although there was plenty of bees, and abundant ventilation arranged through the straw. As there is nothing like it any where else in the whole apiary, we hope we may be excused for thinking if we had left them all with their natural stores we should have had many similar cases.

'Tis true, many of the sugar fed colonies soil the snow, and Mrs. N's. clothes on washing day, (she says they are sure to fly on Monday forenoons) but the spots are light colored and of a yellowish hue, and even when fed late, on their syrup, they never exhibited the symptoms of the colony just mentioned.

'Tis our painful duty also, to chronicle the loss of 4 other colonies; and a fifth that was found with about a half dozen Italians guarding the entrance from a series of such desperate attacks made on them by robbers, that we were led to look inside, and beheld the Queen disconsolately trying to "keep house" alone. This colony was the only one of the 13 put under the manure heaps in Feb., but what are in fine condition, and in their case they were so well protected from the cold that their numbers were thinned down, one by one, until the *last half dozen* were actually doing duty as lively as ever. We caged the Queen with her few remaining subjects, proposing to send them to "Cyula" (we hope you will all know her bye and bye) but "more troubles" interrupted this neighborly plan. The day had been unusually fine and the bees poured out in such glee, that we several times feared for our Queens, and sure enough shortly after noon we heard the *very unwelcome* note of swarming. We could with a good relish, have "taken a shingle" to every individual bee, that started the mania, but there was no help. One Queen with a clipped wing we caught in a short time, but one young unclipped lass we found just in time to get her out of a knot of bees at the entrance to another hive; this one we recognized from her shape and color, and put her in her own home forthwith. The other one—well, she died, for no other reason that we know of, unless she did it "just a purpose." Although "Cyula's" Queenless colony received no positive aid, they can take notice they are remembered.

As to the cause of the swarming out, we found the colony of the Queen that died, destitute of eggs and brood, although having plenty of bees, and so think it likely she had failed, as she was nearly 3 years old; the other was a remarkably prolific Queen, reared last fall late, and had a fine family of bees, with brood and plenty of everything. We can only guess that the bees went out with such a rush that she thought they wanted her to go too, and she "go-ed" but we hope she will be good now and won't any more.

We have now lost 13 colonies out of 57 and our only way of accounting for most of the losses, is that there were too few bees in the fall. This is not wholly satisfactory however, for one of our most populous, are among the missing, (see page 30 March No.) and three, that were among the very weakest are doing finely, in fact one of them had many more bees this spring than when put into the house. When Mr. Wilkin was here last Nov., we showed him a colony with the remark that it seemed folly to expect, such a handful of bees to winter, to which he replied they might nevertheless, and to our astonishment they are to day one of our fairest. Why didn't *they* dwindle down too?

If we were going to make any deductions 'twould be about like this: Weak colonies *may* build up, but the chances are greatly in favor of their going the other way; and the worst feature about it is that, judging from a great number of reports, we seem to have but little power to control the matter. Also, strong colonies *may dwindle down*, but the chances are rather in favor of their not doing so, hence we must conclude after summing it all up that,

STRONG COLONIES ARE ALWAYS SAFEST, and perhaps we might add, for all operations in Bee Culture.

March 18th—And the end is not yet. Two more stocks failed on account of insufficient numbers, in fact one colony hadn't "ary numbers" at all when we found 'em, but the combs indicated they had dwindled down to a very small compass indeed before they left "teetotally."

All we can do now is too keep saying over to ourself "we'll show folks how we can build up bees if we can't winter them."

March 19th—No more mortality, but we find a Queenless colony on which to practice our teachings. Have just made a feeding house or shed. The north and east sides are closed and south and west open, the roof slants to the south, leaving the eaves which project over the floor considerably, just high enough to walk under.

The meal is distributed on the floor, which slants slightly to the south, in such a way that the sun's rays strike it almost perpendicularly, some portion of it during the entire day.

The bees have been at work all day in it, although much of the time they flitted there and back during quite a drizzling rain; they also worked there briskly, in the direct rays of the declining sun long after they had ceased flying elsewhere. Floor is 6 x 12 feet (longest east and west) and roof is enough larger to protect it from ordinary showers.

'Tis in the north-east corner of our inclosure, and the tight board fences 8 f't high, keep off cold winds quite satisfactorily.

March 20th—An amusing phenomena. The day being too cool for bees to fly ordinarily, they kept at the entrance of their hives until the sun came out between the clouds, when they went for the feeding house with a rush; to return almost as quickly if the sun chanced to cease shining. At about 2 o'clock the effect was novel and striking, when all had been silent, after about 2 minutes sun-shine, we would have a sweep, and rush, to be followed by a small "roar" of happy industry. The feeding house being warmed only by the sun, was deserted as soon as it ceased lending it's rays. As an experiment we presented them with little heaps of wheat flour, corn meal, ground chess, rye and oats, and lastly dry sugar. All of the grains were dabbled at, generally new comers, but all soon settled down to a decided preference for the *rye and oat meal.* A few tasted the sugar but seemingly concluded the meal was of much the most importance.

Friend Gallup says in *A. B. J.* "Our theory is, that bees kept perfectly dry, discharge the excremental portions of their food in small and perfectly dry pellets" etc., now we protest against this on the ground that it's Quinby's "theory," and that he should be left entirely in undisturbed possession of it. After having given it publicity at length, in so many periodicals it seems rather hard to have some other writer claim it now; the more so, as we think it can easily be shown to be *an error the whole of it.*

Mr. Q. should remember that bees are constantly cutting away the combs, or gnawing them down in places, whether they have capped honey or not. The old brood combs containing cocoons are cut and dropped down along with the cappings, which are of a different color, as are pieces of different combs; this is all we find on the bottom-boards of our hives, and we have examined a great many. Like the assertion that the extractor killed the brood, this is a question needing no argument, for every bee-keeper can easily see for himself. If you wish to be sure, get a magnifier of moderate power, and also throw some in hot water as Mr. Q. advises, until the wax separates from the cocoons and propolis.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS.

MEDINA, OHIO.

Terms: 75c. Per Annum.
For Club Rates see Last Page.

MEDINA, APRIL 1, 1874.

B. K. M. came to hand March 6th, *A. B. J.* on the 7th, *N. B. J.* 23d, and *World*, on the 25th.

Lest it might escape your notice, we would remark that we are a little larger this month.

Mr. Curry writes: "The bees in the hot-bed must have ample ventilation," but we have found no trouble as yet when covered with a quilt.

Among our subscribers we find a George *Bee*,
And what is still more funny,
Another hailing from Cleveland, Ohio,
Rejoices as, Riley *Honey*.

We wonder if the following from Josh Billings, won't apply to bee-keeping: "You'd better not know so much than to know so many things that a'n't so.

Clubbing rates will be the same as given last month with the exception of the *B. K. M.* which has been advanced to 1.25, consequently price will be with Gleanings 1.75 instead of 1.50, and $4.25 for all four.

Mr. Quinby gives full directions for making his hive in *Country Gentleman* of March 19th. The article certainly merits the thanks of the bee-keeping community, for it is a well directed effort toward enabling those who wish, to make their own hives.

In *Rural N. Y.* for March 21st, we find excellent reply to Prof. Riley, on Bees and Fruit. The writer covers the whole ground we believe, unless it be that he omitted to consider the *moral* effect it might have on a community, if the plan of poisoning, were adopted whenever a neighbor's stock became annoying.

◆

In describing the Buzz-saw last month an error occurs in the positions. When the operator stands at the end of the table, the balance wheel should come at his right hand; the saw just before him; the sliding figure 4 shaped piece, at his left, with the square bar nearest, and the diagonal, farthest from him. Also the "parallel bar" seen hinged to the back of the table in fig. 4, must be on the right, directly over the balance.

◆

As ours is somewhat an experimental Apiary, and our time necessarily much occupied with this "growing child." (Gleanings) we fear we shall not be able to furnish either Queens or bees before July, more than we have already orders for. Messrs Shaw & Son, Daniels, and Dean, are making preparations to rear them largely, and can probably furnish better stock than ours also; we would therefore advise that orders for early Queens be sent them.

◆

Our readers will notice that we are now using the mailing machinery, and if the date after the name is not found to indicate the time at which their subscription should expire, we hope they will advise us at once. A small 3, before the word Jan., indicates they have had Vol. 1., also; and if fig. 7, precedes the 3, it means they have both the Photo., and Vol. 1., in order that we may know in answering any inquiries a subscriber may make, what he has at hand to enable us to make our answers fully understood, without going to too great length in writing him.

'TIS no very difficult matter to make any of the hives you may have in use, over into the New Idea plan. All that is necessary is to remove one side from two of them and fasten them together side by side. The covers and bottom-boards can be united weather proof by the strips of tin mentioned on page 39. Make the joints air-tight, and then make them look as well as you can with paint. Although, 'tis true, new hives just as we want them are rather nicer, yet many feel as if they cannot afford to throw away their old ones, and we *must* avoid paying cash out, certainly, if we are going to make the business self sustaining.

EVERY day brings reports from different localties, of successful wintering; those wintering in doors and out, on sugar syrup and natural stores, with old bees or young, upward ventilation and lower, and even with stores *entirely unsealed*, both of honey and syrup, in fact under almost all circumstances, seem alike to have been successful. Can we not all join together in a feeling of gratitude and thankfulness, without stopping to quarrel over who was right and who was wrong. One friends who feel inclined to be so very sure they have found the bottom of the matter, should remember that where all have succeeded, nothing is proved. [Since the above was written a *few* losses have been reported.]

"WHY, Mrs. Tupper!" Is it possible your bees *also* object to using combs transferred in a different position from the one in which they were built?

We have for years used the combs cut from tall box hives, turned down horizontally, and transferred at one time the combs from 30 American hives to the L. frames, turning a half of every comb. We have many times also for experiment turned deep store combs *upside down*, and they filled them with honey right speedily.

Again, our Revolvable and Reversible friend Price, has a hive that admits of being revolved every few days *to make the bees labor more industriously*.

We haven't heard from him at all since his controversy with Dadant. Where are you friend P.?

IT'S a funny way, some people have of abusing another in print, and then apologizing by letter. It certainly makes it all square, and perfectly satisfactory, besides being soothing to the feelings.

It often reminds us of the woman of Irish birth, who after having sold a heavy silver watch case to a Jeweler, and got the money carefully knotted in a corner of her handkerchief, remarked exultingly,

"And it was my Jemmy as stole the watch from one of the 'b'yes' at school, he did."

"Stole it did you say?" replied the alarmed Jeweler, extending the watch back toward her.

"Ah, faith and be jabers and didn't I larrup him well for it? It's all right." And off she marched triumphantly, leaving the Jeweler to moralize on *her* way of easing ones conscience.

WE shall really be obliged to state for the benefit of a thoughtless few, that our large supply of the different No's of Vol. 1, cost us considerable money, and we cannot *give* them to those who did not subscribe for them. We value complimentary letters where we think them sincere, but when they wind up with a request for something of which they have omitted the necessary remuneration for the cost of getting up, we have a kind of feeling that we would regard the enclosure of the modest little sum of 75c. as the highest compliment that can possibly be paid GLEANINGS. We really shall have to make it something this way: Sample numbers, our choice, free; your choice 10c. each.

Of course we shall always think it a pleasure to furnish our *regular subscribers* with missing No's, or to replace any they may have loaned or soiled in procuring subscriptions, *free of charge*.

MR. MOON takes nearly a page to show that we pronounced the introduction of virgin Queens risky, but afterward *discovered* it to be much easier than the introduction of fertile Queens. Mr. M. also states that it was well known before, which we are very happy to hear, for *he* certainly has faith then in a matter we expect to have stubbornly contested. For instance: In *B. K. M.* for March, Mr. King replies to a correspondent who asks if t'will do to introduce Queens as soon as hatched, in the following prompt and ready manner:

"No. Bees are more inclined to kill unfertile Queens"

Now friend M. you will do us quite a favor if you will show Mr. K. his error.

"Our Discovery." Well 'twas substantially this:

A Queen newly hatched will treat the first bees she meets as if they were of her own family, and they in turn either pay no attention to her, or treat her kindly; but if she has been with the bees of any particular hive long enough to get acquainted (even for *one hour*) she will act as an intruder among any other bees, and will be liable to be stung. Had Mr. M. been over our experiments detailed in Vol. 1, he might not have misunderstood our remarks. We would like to add that the *World* is improving, but we find *seventeen* distinct errors in spelling, punctuation etc., in the editorial referred to. Mr. M. may be an excellent practical Apiarist, nevertheless.

HONEY COLUMN.

Every good housewife, is supposed to know how to serve up honey for food without any instruction, and all are familiar with its fitness for warm biscuit, or hot buckwheat cakes, but we beg leave to suggest a dish, in our opinion far superior to either, and certainly more wholesome. Get some clean nice wheat, the best you can find, have it ground so coarsely that the grains are just broken, in fact we call it "cracked wheat"; a common coffee mill set very coarsely will grind a sample for you to try, but in our family nothing short of that "everlasting windmill" could begin to supply the demand. Boil it thoroughly with just enough water to allow it to turn out of a dish when cold, like jelly. To serve, cut it in slices and warm it in the oven until it will melt butter nicely, pour on plenty of clover honey and ——we leave the matter with you, we are done.

Yet stay! It only costs per lb, just one half the price of wheat flour, and if you wish to "hold out" till noon on a heavy day's work that must be done *before* that time, try it.

I have 250 lbs comb honey, mostly basswood—want 25c. for it, here. J. F. TEMPLE, Ridgeway, Mich.

I have about 1400 lbs ext'd honey, from golden rod' buckwheat and boneset; I am offered 13c. but want 15' Feb. 24th 1874. JAMES HEDDON, Dowagiac, Mich.

DEPOSITORY OF BLASTED HOPES,

Or Letters From those who have made Bee Culture a Failure.

TO the Editor of Gleanings:—We have lost 15 colonies out of 57, and what is more, several others are so weak in bees, we fear we shall lose more. Can you give us any advice?

From your old friend, *Novice*. Medina, Mar. 24, 1874.

Yes. Stop trying to teach others how to winter bees, until *you can winter your own without loss;* meanwhile listen to those who *do* do it.

I put into winter quarters 43 colonies, took out 27 alive, probably will not get over 20 through till fruit blossoms appear. Father put in 38 colonies and took out 5 alive. In every case without an exception those that are alive, are those that were strong in the fall. Probable cause of their death was dividing and subdividing to raise Queens last season. Now sir if I don't have strong swarms after this, I am mistaken.

We have just got our high board fence done around them, and think it will be a great help. I am not at all discouraged yet, but, sometimes get a little *blue over it.*

Father and I will have 40 to 50 swarms to commence with; he has purchased 12 swarms to-day and will get more. I never saw bees carry in rye meal as fast as they have in the last few days, little and big swarms, and the Queens are doing their best; no deserting yet. If hemp will supply bees with pollen we shall raise it. Just got some seed to sow.

Chatham Center, O. March 19, 1874. F. R. Shaw,

That's the tune to wind up with, friend S. If some of our "hopes" are "blasted," we ain't "licked" by considerable. It may be well to state that both S., and ourselves used stoves in our bee houses when the weather was quite cold, while the rest of our Medina bee-keeper's used none: we are the only losers; Dean, Blakeslee, Shane, Daniels, and Parsons, have all done well, the two former losing none. If our "tinkering" with stoves shall prove a warning to others, we don't know but we "feel happy" after all.

PROBLEM 20.

IT'S been a long while coming but here it is; we wish our readers to get at it, just as we did. We wish friend P. lived near us that we might compare notes with him as we are almost "in the same boat;" besides we really have much sympathy and respect for all honest preachers, but not for the class who put *Rev.* before their names simply for a lever to help them sell goods, as one of their number once expressed it; but our friend has the floor; we're rather backward—never "talk" much.

MR. NOVICE, Dear Sir:—I wish to ask you a few questions. Four years ago I commenced bee-keeping. First year increased from 12 to 26 swarms, lost all but one first winter—dysentery. Made of that one left, and one more bought in spring, 8. Sold the 8 in fall because had to move, (am an itinerant Preacher.) I now have only 2 swarms, wish to build up an Apiary of 50 to 100. I would build up to that, this summer and sell ⅔ of them in fall if I could, as bees are nearly all dead around here and would sell well, I think.

Now how shall I do? Shall I use full swarms, or Nuclei? or shall I use both? I suppose I should use *some* full swarms but *what proportions?*

And now comes the Problem part.

Will it pay to use syrup to make combs when there is no pasturage? or will it be cheaper to *buy* combs?

I am located 1½ miles from a Basswood grove. Would bees do well that distance? or would it not be better to move a few of the strongest swarms to the edge of the grove during the Basswood yield?

How would it do as the Basswood harvest commences, to strengthen some few of the strongest swarms in two story hives, or long Gallup hives, and take them to the grove during the harvest and extract as often as possible? Z. D. Paddock,

Light House, Ills. March 13th, 1874.

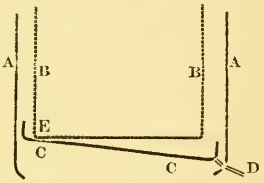
Since our losses we are getting afraid to advise, but will hazard this much: We would use only full strong stocks, and do all our dividing by taking a full comb from each and making a strong stock at once; then when you are compelled to stop on account of winter, you are all right.

From the experiments we made in artificial comb built on foundations, we think nice combs *can* be made by feeding sugar, cheaper than they can be bought, see page 4. A very little feeding will keep comb building going on, in warm weather.

In regard to the Basswood grove; Italians will work very well 1½ miles. We should say, take all or none, and be constantly with them wherever they are.

HOW TO MAKE A WAX EXTRACTOR.

TAKE this paper to your tin-smith. Tell him to make a bottomless tin dish, (with a close fitting cover,) about 9½ inches high by 12½ in diameter, as seen at A.



It will be observed that the bottom edge has a rim attached, tapering inward, this is to be made just right to fit inside of a common tin pan, which we use to generate the steam. B, B, is a plain basket or can, made of coarse perforated tin; it has strait sides and bottom, and joints are simply lapped and soldered; size is 8¼ high, by 10¾ in diameter, this is to hold the comb or cappings. Now, if this were simply suspended inside of A, the wax when melted would run down into our tin pan boiler. To prevent this we have a tin plate C, 11¼ inches in diameter, with a rim 1½ high around the edge, held permanently by three supports soldered from it to the outer case A, (besides spout D,) so as to hold it sufficiently on an incline to allow the wax to run out of the spout D. Now when we have three supports fixed in this pan in such a way as to hold our comb basket B, B, in a level position, and exactly in the middle of A, (the back edge E, nearly touching the bottom of the pan C,) it is done. The spout D, only projects about 1½ inches, but another one about 6 inches long is made to slip over this, to carry the wax off from the stove into a proper receptacle.

The whole arrangement is to be kept in the honey house set over a common tin pan as mentioned, and the cappings, waste bits of comb etc., are thrown into it as they accumulate. The short tube D, must be kept tightly corked to keep out bees, and to keep in the honey. When the comb case gets full, lift it off the pan containing the honey that has drained out, and set it over a similar one containing boiling water on the stove.

By having them made at home you save freight, but if your tinner can't make them for $3.00 tell him we will. P. G. says they should have "ears" to lift them by.

A SHORT CHAPTER ON POULTRY, With a moral that may have a bearing on Bee Culture.

ONCE upon a time a lad "got up to the head" in his spelling class, and what is more he did the same thing, not only once but several times, until he eventually secured a silver quarter of a dollar, awarded as a medal the last day of school, to the one who should have earned the most head marks. On his way home on that eventful day, he mused somewhat in this way: "spelling I have conquered, or at least pretty nearly, (remember he was of only about a dozen summers,) and now what is to be "licked" next, and what is to be done with the silver quarter?" If we follow him a little, we may discover his project for solving the two problems at once.

That same afternoon after having obtained the maternal sanction of his plan he trudged off 2½ miles to "Grandfathers;" and "Grandmother" being absent the following colloquy occurred:

"Well, what's broke now?" queried Grandfather who sat by the fire in the old "cellar kitchen."

"Nothing's broke, but I want to buy two hens."

"Want to buy *two hens?* what for, where is your money?"

A display of the quarter, and a relation of how he came by it, seemed satisfactory, and then came the query:

"But don't you want a rooster too?"

"No, *they* don't lay eggs."

"You are only intent on making money then?"

"Yes; if they lay eggs enough to buy more hens, I shall probably get a rooster too, but just now I only want what the quarter will pay for."

"You would not take a rooster then as a gift?"

"I had rather not."

A bargain was soon made, after the above preliminaries, but we must digress a little here to explain that beside the fire place in this old cellar kitchen a brick oven had been built in the wall, and Grandmother had so far domesticated two large cream colored "biddies," that they had for some time been in the habit of laying great white eggs in this same oven; after which feat they modestly betook themselves out doors with the rest of the fowls; but it always seemed that these two hens had a kind of a way of looking up at a body as if they knew something that other folks didn't; they only approached their novel nest when Grandmothers back was turned, and rarely if ever intruded in the house at other times.

Now regardless of the "great store" she "set" by these two, Grandfather picked them up probably because it was less trouble, and our hero of the spelling book was traveling home happy, with a hen under either arm. To confess the truth we fear his enthusiasm *was* somewhat abated before he reached home, and his musings as to whether these two hens were not *unusually* large, were once brought to a dangerous crisis by his slipping down on a steep rough gravelly bank when near home. 'Twouldn't do to let the fowls go after all this trouble, and so he "held till 'em," but to judge by the twist of his mouth at this time, we should think those gravel stones were probably quite harrassing.

The fowls were duly housed and cared for, and many a happy hour was spent in devising improvements, by way of giving them a wider range without any excessive cash outlay; furnishing them a better variety of egg producing food, studying all the agricultural papers had to say on poultry keeping etc., etc. Bye and bye, a Poland hen with a brood of 14, comical top-knotted chicks was added; they were purchased for a small sum, of a neighbor who had become tired of their mischievous propensities.

Regular accounts were kept and the "hen business," as his sister termed his hobby, really paid; not much it is true, but when the young Poland pullets began to lay in Feb. and eggs were *eighteen* cents a dozen, our young friend felt as happy as the proprieter of a small Gold mine.

And now we come to the "pint" as Major General Jack Downing used to say, and in fact we should not have written so much on Poultry for a Bee Journal had it not been for this same "pint."

This same poultry house and yard, built of old rotten boards, refuse lath, and all sorts of odds and ends, was on the *south side* of the *horse barn*; the family poultry house, a comparatively large and expensive affair being directly *east* of it; with the MANURE from the stable bounding the west, which in fact before spring, came very near covering the whole structure entire, do you wonder those hens laid eggs? On the ground of economy the roof was entirely open on the south side, so the sun shone directly on their scratching ground, and some tempting nests were formed by bedding boxes back under the manure with entrance partially obscured by straw. Of course eggs never froze in them, and in fact the back part of their domicil was quite a warm retreat during the coldest days. Considerable of this coarse stable manure was scratched through the loose structure, and to furnish them employment their grain was buried in this, which kept them scratching the material over and over until it was like sawdust, thereby keeping the ground under their roosts always clean and wholesome, on the plan given by Mr. Stoddard in the Egg Farm papers in *American Agriculturist.*

In this case it seems a condition was secured free from frost, wind, rain and snow; yet admitting sunshine during the middle of the day all winter long. Is any thing else needed for the successful wintering of bees?

After enlarging the "hen business" and trying it away from the barn and *manure heaps*, it did not pay as well, yet the real cause, probably, of the difference in results was not thought of at the time.

P. S.—"Grandmother" was very much inclined to be vexed at the loss of her "pet biddies," yet under the circumstances, and in consideration of their being in the hands of her favorite grandson *Novice* she at last became reconciled.

Also, we omitted to state in the proper place, that Father's larger number of fowls in their large poultry house, with 24 elaborate nests, gave but very few eggs compared with ours, and they almost invariably froze, as did the combs and feet of the fowls, besides.

Humbugs and Swindles

Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

THERE! that's just our luck. Lizzie Cotton has been offering her $15.00 Controlable hive for *seven dollars*, but the magnificent offer was only to remain open until Feb. 24th, and we didn't get the circular until March. After above date, price is positively be as heretofore $15.00. This hive is not patented; oh no! but if $7.00 gives a profit we yankees would like to know—There! we wonder if the $10.00 Honey receipt isn't offered for less than half of its value too, *for a very few days*.

Very few patent hive circulars have come in of late, yet there are other swindles in the bee business that need ventilating. Foremost among them comes our Queen-rearing friend of Kelley's Island, who writes letters using the terms "thee" and "thou," we're sure we don't know for what reason, for he can't be a Quaker. *They* wouldn't advertise as he has done, at extra prices, and then send those reared elsewhere. A gentleman who will come forward if need be, tells us there was not a single Queen reared for sale on the Island last season, and that our "thee" and "thou" friend did not reside there. Worse than all, the real genuine *Foul Brood*, is raging there badly, and he was informed, they had been unable to stop it, even though they had tried burning, burying, and all prescribed remedies. As there are but few colonies there, could not our Ohio Bee Keepers afford to buy them, and have them entirely destroyed until such a time as the Island shall have become free from contagion. Those who have had experience can tell that the disease is no trifling matter.

Would it not be better in shipping Queens, to use only sugar or candy, and to destroy all combs received with them. It really seems no more than just that every locality where the disease has prevailed should be given publicity, even should it occasionally result in pecuniary loss to single individuals.

If any facts can be brought to show we are in error in regard to the Island, we shall be most happy to publish them.

Another class of evils cries out for a remedy; the following extract will illustrate it. We stand ready to furnish all names when necessary.

DEAR NOVICE:—I am much obliged to you for your service in the matter between me and ——. I shall write for him to return the money and should he do so, you may withhold the complimentary notice I sent you, as I should dislike to do any body an injustice, and am willing to give him the benefit of his *explanations*, though *its* hard for me to believe.

About the same time (1872) I sent the money to ——, I also sent ($30.) to—— ——for two *Imported Italian Queen Bees*, I still hold their acknowledgement of the receipt of the money, but the Queens have not come to hand, nor have they returned the money; they wrote me once that they would send me some of their *wares*, or any thing else they had to sell, but I do not want their *wares*, nor the bees now, as I have rec'd Queens from other parties. I have so informed them, but the money is not forthcoming. Money is as scarce as "hens teeth" down here, the use of the $30. would have been worth $5.00 to me for the time they have had it.
J. P. PARKER,

Alamo, Tenn. March 5th, 1874.

The remedy we should suggest for such cases would be to send directions with the order to have the money returned unless the order could be filled inside of 10, 30, or 90 days as the case might require. Parties who cannot comply with such a simple request are not deserving of patronage, and should be held up publicly to warn our friends and neighbors.

Reports Encouraging.

LAST season was a splendid honey season here. One Italian stock gained 6 lbs. in a day, and built the comb. A new Italian swarm came out June 9th, and filled 9 frames of comb, each frame 10 x 14 outside measurement, and 35 lbs. surplus; the surplus was removed and the rest left for winter, and they are all right to-day; the 35 lbs. were all sold at 60 cts. a lb., giving me cash money $21.00, how is that for Italians?

Limeport, Pa. THOS. F. WILTMAN,

FRIEND NOVICE:—My Bees (35 colonies) have all wintered all O. K., 16 on pure loaf sugar. Kept in house built on same principle as yours. *Think*, the sugared ones, the most dormant. All had a good fly on March 2nd. Hard work to wake up the Italians, *particularly* those we fed on "sugar syrup." All the blacks I have (5 colonies) were quite uneasy and hives slightly soiled, but colonies strong. I now think that a warm house, (not below 40° F.) "Sugar syrup," and Italian Bees, combined, make wintering a certainty. Raised over $800. worth of honey from 16 colonies, last season, and expect to fill the cellar, the coming year. Don't *much* expect to revolve quite so much *can*, the coming season as we did last.

I think the cause of my success is, that I made apiculture a *specialty*. Do not think farmers should keep bees, any more than run a carpenter's shop, or saw-mill. For a good job, one iron in the fire at a time.
JAMES HEDDON.

Dowagiac, Mich. March 13th, 1874.

Now friend H. you have certainly hit the nail on the head in one thing, and by the way it hits *us* pretty squarely on the head too. There may be a difference of opinion in regard to farmers keeping bees, but 'tis morally certain that one thing *done well* affords more pleasure and profit too, than a dozen things done in haste and of course poorly done. We really believe our present loss in wintering was on account of the "too many irons," for we really could not find time to do, what we earnestly insisted on having our readers do, viz: build up our colonies strong in the fall. We have a desperate determination now of giving our whole time to GLEANINGS and the bees, and if some of the pesky "irons" don't get scattered right and left regardless of the loss entailed it will be—well, if the consequence should be that we don't earn more than 25c. a day, we'll make our expenses come under 24, and we'll just enjoy ourselves, having fun with the bees, and writing letters to such pleasant friends as yourself Mr. H. and the rest of our bee acquaintances. We have made our Journal larger this month just on purpose to have a "big talk," without feeling we were crowding something, and to allow our correspondents to compare ideas more freely also.

FRIEND NOVICE:—I took my bees out of the house March 2nd, and found the entire one hundred stocks I put in last fall all right. That's pretty fair for bees that were mostly wintered on natural stores, is it not? You had better *look after* that "Sugar Diet" or I may be induced to get a wind-mill or two, and start a rival to GLEANINGS, to advocate "Natural Stores." JAMES BOLIN,

West Lodi, Ohio. March 17th, 1874.

Three cheers for friends H. and B. If we can't swing our hat over our own success, we certainly will at every such report, and we only hope it may get swung all to pieces, ['cause then we'll have a new one,] during the next month.

Heads of Grain,

FROM DIFFERENT FIELDS.

WOULD hives of the "Simplicity Persuasion" do for frames like mine 12¾ x 14, out-side measurements? How would you keep the frames of such size from swinging together, and against the side of the hive, without tacks? How do you manage when your hives get so full of brood by extracting, there is no room for honey? I find the only remedy to be boxes. What per cent of your dollar Queens may be reasonably expected to be pure?

Wyoming, Wis. R. L. JOINER,

The frames would have to be made with considerable care that they might hang plumb, we have used them 12 inches deep and found them to work nicely with *nothing* to keep them in place, at all. We believe those who handle many frames, very soon reject all nails, staples, and every thing of the kind as too troublesome, besides they are entirely unnecessary with ordinary workmanship. In place of the boxes we would use an upper story, or increase the width of the hive on the New Idea plan. Our $1.00 Queens should be at least half of them "good for 3 banded bees." In the neighborhood of Shaw & Son, last fall, so far as we can learn they proved nearly all pure.

DEAR "NOVICE":—I have received a specimen copy of your "GLEANINGS," the reading is good, composition done well, the press work—allow a suggestion in regard to that, a little more "impression" and then "feed" up to your "guides" so as to get a "register" on the "head rule." When I chance to hear of an Apiarian interested in Printing or *vice versa*, I claim a right (not patented) to be impudent; the latter "is one of whom I am which" hence the liberty of criticising "GLEANINGS." Enclosed (you have found previous to the present reading of this sentence) a card that I have just completed for you, accept as a token of appreciation of your efforts to promote ("sugar syrup" and) apiculture. Of course they do not come under the head "of its being sincerely wanted," (quotation from "GLEANINGS") but then you can put my name down on the subscription book, and I will pay when I render the "FAT" from the "CRUST" of our old "PI" and sell for soap-grease.

Novice can honey be extractod from the comb before it is capped by the bees, *and be considered pure*, or in other words during the Linden or Basswood harvest, can it be thrown out as fast as the combs are filled before the water has thoroughly evaporated, and in such cases is it not liable to sour in the jars? Will it pay a person with 7 or 8 hives to purchase an extractor?

Leavenworth, Kan. ALONZO BADDERS.

Give us the criticisms by all means, we value them more than we do commendations. We know the register isn't good and we keep trying to do it better. It takes "home-made" printers a little time to grow into good ones. Thanks for the cards, we have put your name down of course.

You can of course extract the honey before it has been gathered an *hour* if you like, and it will be pure honey, but it is thin like sweetened water and has a raw taste and will most assuredly sour.

If left until the bees just begin, to cap it over it will be all right, and in no danger of souring, and we thus save much labor in uncapping. *We* should use an extractor if we were never going to have more than *one* hive of Italians; if we did not make the honey pay for it the first season, we would the second.

In regard to the raw, unripened honey: we think, but are not positive, that evaporation in a slow oven will give it all the good qualities possessed by that ripened in the hive by the bees. An ingeniously written article in the *Rural N. Y.* for Feb. 14, would imply to the contrary, but we must think it more theory than actual practice. We will try and make some careful experiments in the matter at the proper season.

I don't think it would be an easy thing to brush the bees off the combs of a hive running over with my cross hybrids. If I conclude to make an Extr. I will send to you for inside work. Will a molasses barrel sawed in two do?

Gallupville, N. Y. B. FINCH.

When they are busy gathering honey they seem to care but little about being shaken and brushed off; at any other time, you would be likely to have trouble.

A molasses barrel will answer every purpose, but it is hard to clean, and heavy to lift around. Honey soaks into wood (unless it is waxed) and we think you will find an Extr., all metal, rather preferable.

Do you think small Queens as prolific as large ones, and small workers as good honey gatherers as larger worker bees? Would not wire cloth do instead of tin, for the bee-feeder? How many holes to the square inch is necessary for the perforated tin? Please speak of this, unless you prefer not to give it to the public.

Will it do to use vinegar or cider barrels for honey if they are scalded with lye water and then painted over inside with wax and rosin as you describe?

Roseville, Ills. MRS. S. J. AXTELL,

We remember one small Queen that was quite prolific. At some seasons all Queens are small, yet we think those uniformly large, generally most prolific. We have one or two Queens that reared small bees, and although well marked they did not seem so industrious as others, and were never very profitable stocks. About perforated tin—see page 34.

Wire cloth will answer but it is liable to get bent out of shape easily, and cause the feeder to leak. All we know on Bee-keeping or in fact *any thing else* is cheerfully at the service of our subscribers; we only regret our inability to give better advice on many points.

We should have no fear in using the barrels if they were first made dry and then perfectly coated with wax. They must be very stout, and should be iron bound for honey is very heavy.

I rec'd a letter from my wife in Ill. that one of my Imported Queens was dead, the combs were as clean as they were in the summer, no signs of any disease, but a mouse had eaten in at one of the mortises in the top bars and had eaten all of the bees on the bottom board, but had not eaten any of the combs, there were not 12 bees alive, now did that mouse kill that swarm or did he eat the bees after they were dead?

Yours truly, D. A. BROCKWAY,

P. S.—They had lots of Sugar Syrup left.

Mice raise "hobb" with our surplus combs when any honey is left in them, but we have never known them to *kill* bees; still such reports are current. Wire-cloth is a preventive.

DEAR NOVICE:—I am an amateur Bee-keeper and and honey raiser, (if amateur means for the love of the thing,) with 20 swarms in movable frames. I was humbugged into buying a Patent hive some four years ago. Although the hive is a good one, the "*patent*" part is of no use to any one not a "*bee master*." I now wish to sell full colonies, but the patent man lives near, and warns all who wish to purchase, that they must first buy a $5.00 right from him. and so my neighbors with American and Langstroth hives, sell bees and I sell none. This is a feature of the patent hive business, I would like you to suggest, in GLEANINGS a remedy for.

Pay no attention to the patent; when you wish to sell bees tell your purchasers you will stand between them and all trouble, and if any trouble is made send us the date and name of the patent hive. If we cannot find fraud and humbug in the claim, somewhere, we really believe it will be the first patent hive we have overhauled that was not an empty pretense.

Is a honey quilt, of two thicknesses of ducking, warm enough for spring months, and out-door wintering, with no other covering except caps?

We use batting between the two always. We are at present inclined to give the straw mat the preference for winter and spring; with a loose cover over the mat to keep out rain; with straw first, and then coarse stable manure to cover the whole hive, we have something that comes very near straw hives for wintering. We have yet to learn of an unfavorable report from bees wintered in the old straw hives.

My experience confirms what you say in regard to sealed brood being in no danger from careful extracting, but eggs and larvæ are "slung" for all they are worth.

With a proper Ext., there isn't a particle of need of throwing out unsealed brood. We never knew *eggs* could be thrown out. Had'nt you better let your wife turn it? We fear you have too much strength to be trusted with such work.

My clipped Queens, for some reason, are soon superceded. Others *may* be as short lived, as I have no way of marking except by clipping. I never have seen a clipped Queen over 2 years old, although I do not doubt that others have.

We have given the matter for several years careful attention, and find short lived Queens and long lived Queens both among the clipped and unclipped in such equal proportions, that we feel sure it has no other effect than to somewhat mar their beauty.

Is Quinby's Queen yard practicable? I do not find it so, as the bees cluster and fill it, and the Queen escapes by crawling over the cluster.

Many things contribute to make it a failure, yet some report quite favorably in regard to it, when they depend on natural swarming. As for ourselves we should find such an obstacle always in front of our hives, an intolerable nuisance, and to those who are in the habit of walking among their bees as much as we do, the danger of being constantly liable to put "ones foot in it" might be provocative of a tendency to profanity. Again, should some of our lady visitors make an ungraceful stumble and land in the "Queen-yard" we might find our profound explanations unpleasantly interrupted.

How am I to make a *cool* dark *dry* place in July and August, to store comb, and honey in frames?

Don't have a cool, dark, dry place at all, but put your combs in a hive that will shut up tightly, (we know the patent ones never do) and you can keep them safely as long as you like, only observing this caution: Combs removed from the hive in warm weather are liable to contain eggs of the moth; therefore they should only be removed in the fall when it is cool, and if kept shut up they will be safe until needed, or during all the next season if you choose. They never mould unless wet or damp. Freezing, always kills all eggs of the moth as has been abundantly proved. We keep our hives containing empty combs in the barn. As for comb honey; extract the honey and put the combs back in the hive.

I want some idea of a Queen Nursery, without buying another "*patent*." I once owned half a Peabody Extractor, but contrived a rude one myself, that works far better, and sold my half of old Pea. for 5$.00, twice the cost of the one I now have. I use a tent to extract in, and winter in a pit. I depend on the extractor for honey, and artificial swarming for increase. Shall try the New Idea plan next season. I have tried the two story plan, in connexion with Hosmer's, "Feeding to stimulate breeding," and failed, on account of tendency to swarm as soon as strong. I would give something to know how to certainly prevent a strong colony from swarming. When you get the Photo of my apiary (if you ever do,) you will see my wife in Bloomers, helping me handle the frames and so on, as fearless as myself, although two years since she was as much afraid of a bee as of a rattle snake. Yours truly,

Wyoming, Wis. R. L. JOINER,

Nothing more than extracting is needed to prevent swarming. 'Tis the rarest fun for us to have a colony so strong they begin to think of swarming; give them empty combs one at a time, and room as fast as they can use it, and your trouble will cease. Tell your wife we are proud to learn there is at least a few who dare be useful *by their husband's side.* Perhaps there are more than we know, but too many are afraid of stings, or rather they think they are.

I have 6 colonies of bees all in movable comb hives, and 4 different kinds of hives. Now I want to get a hive that is right and stick to it, I am tired and sick of so many kinds. I cannot divide my bees for the frames are all different sizes.

Tecumseh, Mich. W. COMFORT,

We wonder how many of our friends know from past experience just how "Comfort"-able it is to have four different kinds of frames and only six hives at that. We wonder if our friend wont go for a universal Standard.

Messrs. Eds. GLEANINGS:—Please give us the best information you can in regard to uniting different colonies of bees that stand at a distance from each other. Dunlap, Ill. D. G. HERVEY.

There are several ways, but all troublesome we believe. As a general rule we would try and build up weak stocks before winter that there may be no occasion for uniting. Notwithstanding what has been written about two colonies united, consuming less honey than when separate, such has not been the case with us, but quite the contrary, and besides the double colonies were no better in the spring than the rest. Moving the two stocks gradually near to each other, is too laborious and slow, when the distance is great, or there are many. We think the readiest way is to wait until the weather is tolerably cool, so the bees do not fly; smoke both and lift the combs and bees from one into the other, rejecting such combs as contain least stores and pollen; if no warm weather ensues for a week after, they are all right, if suitable weather for flying should occur soon, fasten them in for a week, or what is better put them in the cellar for that length of time.

Continued from front cover.

the necessity of painting them any more than ordinary household tin ware. Clean tin, can be washed with boiling water; when painted or japanned it cannot.

I have got the Extractor finished, am well pleased. I took the gearings and inside work which you sent me to Chatfield & Smith of Anamosa. They did me a good job. I had it finished in the best manner, it is all metal, runs like a top, and my wife can pick it up and take it where she pleases. I would not exchange it for any other one I have seen.

Viola, Iowa. R. J. TALBOT,

◆

ABOUT ADVERTISEMENTS.

AS a matter of course we receive but a limited number of advertisements, compared with what we would did we make no discrimination, but insert every thing offered, without a care as to whether the parties were proposing to do a fair business or not. Our ideas on the subject are given exactly in this little note just sent in with a new advertisement.

Will try to use my customers as I would wish them to use me. Yours truly,

Ashland, Ohio. E. J. WORST,

This sums it all up exactly. We ask nothing more, but when one does not scruple to receive money for a patent hive that he knows will not work, or that he has no "right" to receive money for; another takes $10. for a receipt for Fertilization etc., promising to refund the money if it don't work, which he never does; a third receives $2.00 for a wonderful receipt for an "Ambrosial" promising too, to refund money, but never does; and still another class receives money for Queens etc., that they can't furnish, and after *two years* time write to our much abused, and patient friend, telling him times are so hard they *can't send* the money back, won't he take some wares, etc.; what is to be done?

We submit the question to our patrons, shall we receive advertisements from such? We are well aware this class of advertisers are quite profitable, and we might *almost* excuse an Editor for turning about and concluding patent hives are not so very bad after all, even had they loudly denounced them, before occupying the chair, "Editorial."

Our Wares.

We shall at all times take the liberty of carefully scrutinizing the prices asked for whatever is advertised in the way of implements, and if we deem the prices asked exorbitant, shall in default of a better way offer them ourselves at what we consider a fair margin.

Recognizing the fact that the good of our readers, (they being by far the larger number,) should always be considered before that of our Advertising patrons, we have not hesitated to offer for sale anything whereby we thought their welfare might be promoted. In putting the dollar hive in the market we expected to incur the abuse of those having hives for sale at prices ranging from 5 to $10, and we were not disappointed. Now it has been suggested that some of these things have been offered at less than cost, to "spite" certain individuals; aside from having no time for any such folly, we have, ever since the days of the "hen business" had a strong Yankee propensity, for making every thing pay *some* profit at least, and our readers may rest assured that when we offer the present number, at the rate of 4c. per copy, in clubs, it probably did not cost over 3½; that the Wax Ext'r offered elsewhere, at $3.00 did not cost over 2.50 all crated; Simplicity hive, 75c. etc., but permit us to say that to secure these results, *real work* of brain as well as hand is needed. If the $1. Queens cannot be reared at a profit we believe it will be our first defeat; a series of papers on the subject will be commenced in our next. The details of our experiments with artificial heat, will be found in Sept. and Oct. No's of last year.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

J. Shaw & Son, Chatham center, Medina Co., Ohio.
I. E. Daniels, Lodi, " " "
G. W. Dean, River Styx, " " "
E. C. Blakeslee, Medina, " " "
Willis J. Phelps, " " " "
W. J. Hosmer, Janesville, Minnesota.
James A. Buchanan, Wintersville, Jeff. Co., O.
Dr. J. P. H. Brown, Augusta, Georgia.
Miss. Annie Saunders, Woodville, Miss.
W. J. Standefer, Dry Grove, Hinds Co., Miss.
W. D. Wright, Knowersville, Albany Co., N. Y.
J. H. Nellis, Canajoharie, Montgomery Co., N. Y.
R. S. Becktell, New Buffalo, Mich.
C. R. Williams, Milan, Erie Co., O.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

Geo. T. Wheeler, Mexico, N. Y.
R. S. Becktell, New Buffalo, Mich.
Kruschke Bro's, Berlin, Wis.

Business & Personal.

H. E. Curry, 208 W. Fourth St. Cin. O., will pay a liberal price for some empty combs.

In order to hasten the introduction of the ☞ STANDARD ☜

Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, Blocks' and all the stand that we think is needed to keep it from the ground.............................$2.00
Twenty frames for above 5¾ c. each...............1.15
Quilt.. 40
Or all complete except painting, for..............3.50
The same in a bundle including nails, hinges etc, 3.25
Extractor made expressly for Standard frames, (will take Gallup frames also) $9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

Diagrams and directions for making above hive will be given in our next No.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, *A. I. Root & Co.*

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpareil space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,	$6.50
Two " " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross,	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,..	19.00
Labels for above, " "	.65
The same with printed address, per 1000	4.25

CHOICE NEW ALSIKE CLOVER SEED.

One bushel (60 lbs.) at	$20.00
½ " "	10.00
¼ " "	5.00
One pound, "	.50

Has arrived and is for sale. Also

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

For further particulars, Address,

CHAS. F. MUTH,
1tf Cincinnati, O.

SALE OF 400 COLONIES OF ITALIAN HONEY BEES.

Having accepted the office of cashier of the Farmers & Merchants Bank of Jefferson, which was lately organized in this place, I will be unable to care for all the 850 stocks of honey-bees I have now on hand; I will therefore sell 400 of them. These bees are all pure Italians, and will be sold as follows:

Single colonies,	$13.00
10—20 " per colony,	12.00
20—50 " or more "	11.50

These bees will be delivered free of charges at the express station in Jefferson, and safe arrival at the nearest express station of the purchaser guaranteed.

All these stocks of bees are in an 8 frame Langstroth movable comb hive, are in good condition and have honey enough to last them to May 15th, or longer. Terms cash in advance.

ADAM GRIMM,
2t4 Jan. 20th, 1874. Jefferson, Wis.

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

DISSOLUTION AND REMOVAL.

The firm of BALDWIN BROS. is dissolved by mutual consent, the same to date from Nov. 1st, 1873.

L. W. BALDWIN,
A. A. BALDWIN,
P. BALDWIN.

The subscriber, having removed to Missouri, will continue to breed choice Italian Bees and Queens from the best stock that can be procured. Purity and safe arrival guaranteed. No circulars.

Prices:—Single Tested Queens, $3; Two for $5. Six or more, $2 each. Address L. W. BALDWIN,
Wellsville, Montgomery Co., Mo.

DO **TRY IT 3 Months for 10 Cents;** or with $3 Chromo for 50 cents; or 6 months with "The Flowers of Paradise," a first-class $6 Chromo, 15½x21 inches, for $1. The National Agriculturist and Bee Journal is a 16-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75.** Send now for samples, and **Liberal Terms to Agents free.** H. A. KING & Co., 14 Murray St., N. Y. 1w2

TESTED ITALIAN QUEENS—Sent by mail $3.00 each.

Nucleus Hives, untested Queen, bees and all sent by express for $3.00. Queens bred from pure mothers warranted fertile, with no other guarantee, sent by mail $1.00.

Orders will be filled strictly in rotation.

Address J. SHAW & SON, Chatham Center,
3tf or I. E. DANIELS, Lodi, Medina Co., O.

EGGS FOR HATCHING—White Leghorns from J. B. Smith's stock, exclusively. Lt. and Dk. Brahmas from Todd Herstine and T. William's prize taking strains. Also, Italian Queens at $1.00 each.

Address
3t5 J. A. BUCHANAN, Wintersville, Jeff. Co., O.

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to NATIONAL BEE JOURNAL, now published and edited by

ELLEN S. TUPPER, Des Moines, Iowa.

Liberal terms to Agents. Specimen number free.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address

DR. J. P. H. BROWN, Augusta, Ga.

ASHLAND POULTRY YARDS.

FRESH eggs for hatching:—From eight different varieties of pure-bred poultry. Send for price list. E. J. WORST, Ashland, Ohio. 4t5

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from imported Mothers and warranted pure and fertile. Send for my circular. Wm. W. CARY,
1tf Colerain, Franklin Co., Mass.

WE can furnish Summer Rape seed, American grown, per pound .20
The same. Imported .25
Above includes postage. If sent by Express 8c. less.
A. I. ROOT & CO. Medina, Ohio.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume 1, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,
BY A. I. ROOT & CO.
Vol. II May, 1874. No. 5

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee-Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to Conduct an Apiary.....49
Can we agree on a STANDARD FRAME.....50
Can we agree on a STANDARD HIVE.....50
Both Sides of the Question.....52
Raising Bees in a "hot bed".....52, 53
Our Own Apiary.....52
Cheap Paint for Hives.....53
Swarming Out.....53
How to Winter 100 Colonies etc.....54
Basket for carying Combs.....52
Queen Cages.....54, 56
Depository of Blasted Hopes.....54
Reports Encouraging.....51
Sugar Syrup, versus Honey for Wintering.....55
Humbugs and Swindles.....00
Page.
Manure on the Brain.....56
Heads of Grain.....57
About *Us*.....52, 53
Pollen.....53
A Piece About Robbing.....57
Changing Two Story to Horizontal Hives.....50
Review of the Bee Journals.....54
Bee Journals and Punctuality.....54
Problem No. 21.....52
Feeding in the Open Air.....58
Wintering.....54
$1.00 Queens.....Back Cover.
Who will rear Queens in the South " " 56
Single story versus Two story.....50, 51
"Roll of Honor".....59

SOMETHING TO FILL THIS COVER.

We once rode into a town in the Southern part of Ohio, and as we were utter strangers, requested a bystander to direct us to the best hotel. The individual addressed acted a little queerly, as we thought, but after looking up street and down, he finally replied,

"I swear stranger, I wish you would ask some one else. There are three good hotels here, and I own one of them." After laughingly assuring him his modesty was a sufficient guarantee, we allowed him to conduct us to what proved to be really good accommodations.

Now in giving our opinion, in reply to numerous inquiries in regard to wares such as we sell, we fear we cannot be as modest as our friend; but even at the risk of having it said by some, that we cannot see good points in other peoples' wares, we will try and give our honest opinion whenever we think it will benefit our readers.

Several letters have been rec'd asking about Winder's new Extractor. We wrote Mr. W. before putting ours into the market, urging him to give the people a Stationary Can machine, as the rotary ones must soon be laid aside. He replied, pronouncing our reasons all imaginary, that his turned easy enough etc. Since then, he has admitted we were right in part at least; but since seeing the dimensions of his new machine, we cannot help thinking he has only abandoned one error, to fall into another. After what we said on the matter last month, our readers will understand why a machine large enough to take a comb *fifteen by twenty two* inches, would be objectionable.

Several have written us in regard to machines made so as to be propelled from the bottom, and a number of such are now in use in different states. We have considered the matter well, and have had the opinion of our mechanical friend, *Mr. Washburn*, on the subject, and have abandoned the idea for the two following reasons: In the first place if we use gearing, two sets of beveled gears will be required, making much friction, and much expense; secondly, if we use pulleys and a belt, the belt, to "hug" properly, will make an amount of friction on the pivots that would be a serious objection, besides the frequent repairs *always* needed to keep a belt from slipping; *especially* when we take into consideration that to work fast, the machine must be started and stopped with a suddenness, that nothing in the *shape* of a belt could stand very long. If we are in error, a trial in the Apiary will quickly show it.

◆

HAVE OUR SOUTHERN FRIENDS BEEN FAIRLY REPRESENTED?

MESSRS A. I. ROOT & CO.:—Your postal card rec'd yesterday, and box of frames to-day. First the postal card: I sat down and wrote it off all but one word which being *Hebrew* I could not make out; Greek or Latin, well, but the Hebrew "nips" us. As to the size of the frames: A neighbor loaned me four year's back numbers *A. B. J.*, Langstroth's and Quinby's books, which I have studied while able during the past winter. I took King's Magazine during '73, and this year have King's, Mrs. Tupper's and GLEANINGS, and swap for the *A. B. J.* Now in all this reading I found the first point to be wintering bees. No one from this latitude (30°) wrote for any Journal, and hives or frames to remain on the stands with no extra protection were not discussed, so we (neighbor and self) concluded as no two bee-keeper's had frames alike, and many had many sizes, we would adopt 10x14 as *our* standard. I got a lot of lumber dressed, and by error it came all 12 ¼ wide. Ambition said, "saw off an inch;" weak back said, "can't do it;" so we put the inch on the frame. As to the fractions, your *college bred bees* may understand it, but our common school black fellows haven't got that far.

Well, the frames are splendid, even if they did cost 8½ cents here. I put 20 of them together—had to file out the anvil a little—and as the slots in ends don't agree exactly with groove in top piece, some little bother to get in the guides. But I'll get up my saw and make *a worse job* of the next lot sending only for corners; can't stand $2.50 expressage or $4.00 by mail. Neighbor came over to look at frames, he thought from sample corners he had seen, that they would not be as strong as nails, but finds them stronger and not half the weight.

We had to transfer 2 hives some days ago, the other 4 will swarm in a few days, when we shall transfer swarms, and old folks too, to new frames, and have no more swarming if it can be helped. I am feeding the two we have transferred all they will take, and some, to two of the others. I took out the frames of the 2 to-day, removed the pegs and clasps, straightened the combs, cleaned out the hives etc. Got stung once in the face, twice on the hand. Went at 'em without veil or gloves—only a little cotton rag for smoke, and think it was bees from other hives that pitched into me while I was straightening the combs. It was built thick and crooked in old boxes, had to split them up with a chisel to get comb and bees out. We used no drum box, but smoked them a little, cut out the comb, brushed the bees in the new hive, fitted best part of the comb in frame, gave it to them and then cut out another, brushed bees in hive, and so on to the end. Didn't get stung at all, but may be the Italians will give us "Jesse" when they come, to make up for it, although the books say they are not as cross as the blacks.

Well, I've got to use neighbor's Peabody, because I can't spare funds this season ("unless our ship comes in") to get one, weak back will grumble, but must "grin and bear it." I can get a few first swarms for $1.50 from 20th to last of this month. I want by division and purchase to have 40 stocks by fall, extract the honey and feed for winter. Will this be undertaking too much?

Wishing you success and a bigger pile than Adam Grimm made the last 5 years; I remain yours,

New Orleans, March 10th, 1874. JAS. H. YOUNG.

Our reason for using fractional measurements, is simply that when we undertook to to classify frames we found dimensions all or nearly all inside measure. Of what use is this? The outside of the frame *must* bear a precise relation to the inside of the hive, but the inside, of frame affects nothing. We found as nearly as we could come at it, that the Langstroth and American frames were most in use, next the Quinby, and Gallup, and as there were a multitude of odd frames in use all along between them, we almost despaired of finding anything broader than the G., and

(*Continued on back cover.*)

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY.

Vol. II. MAY 1, 1874. No. V

HOW TO CONDUCT AN APIARY.

No. 5.

IN these papers we shall only consider such a course of management as will probably give the largest crop of honey; for rearing Queens for the market will have to be considered rather as a separate department, and will necessitate a somewhat different mode of management.

In our Northern localities, we believe there is seldom enough honey gathered to render extracting necessary in May, and the large amount of brood under way, requires an amount of food that is many times overlooked.

We would make it the most important business of the month to see that every colony has at all times an abundant supply of food. We have sometimes on examination, found what we supposed a great plenty, but in a week more, have found brood in all, or nearly all the combs, and not a cell of honey to be found any where. Of course brood-rearing had to wait until some could be gathered from the fruit blossoms, and at evening we would find a tolerable supply scattered among the brood, but the next morning we would find them once more entirely destitute. Should bad weather occur at such a time, a careless Apiarist might never guess what it was that so suddenly checked what had been one of his best colonies; in fact we have known bees under such circumstances, starved outright, in the month of June.

Perhaps next in importance, is inserting a clean empty worker-comb in the middle of the brood nest, *as often as the colony will bear it.* To determine this, requires some judgment, and much mischief may accrue from going too fast; a feeble colony that have just begun to get up a tolerable cluster of brood, would find their "house-keeping arrangements" upset to such an extent by this proceeding, that it might almost spoil their value for the season. You had best make a few careful experiments; if at the end of a week you find the new comb nicely filled with larvæ, and none of their older brood left too much exposed, if the colony is *strong*, they may have another comb and so on. One great point to be secured, is to have combs of brood all nearly of an age, that the Queen, nurses, etc., may proceed with their separate duties as we would hoe a field of corn, instead of searching all over the combs, to see what cells need attention.

This is the great month in the Northern States for transferring, as all agree we believe that the most favorable time is during the bloom of the fruit trees. With all deference to good authorities, we would advise to omit the drumming out process. It seems to us that it only needlessly bothers the bees, and yourself also. In our opinion, by far the easiest, and safest plan, (see Vol. 1, for May,) is to give the colony one, two, three, or more good combs of brood from other hives, and then distribute the transferred combs in place of these, that the work of patching up may be distributed among several, and our transferred friends will have nothing to do but to reconcile themselves to a new hive having a few new combs perhaps, among their own.

As we have often before said, before you commence transferring fix your new hive nicely in the place the old one occupied, and be sure you pack it all around with saw-dust, in such a way that the Queen and bees *cannot* make a mistake and crawl under the hive instead of into it. We feel *sure* that any of our readers, can work without any danger whatever, without veil or gloves, if they only use plenty of smoke to start with. After the bees are subdued, get out a sheet of comb as neatly as you can, and shake, or brush off every bee at the entrance of the new hive. If they don't go in at once, never mind, they will as soon as there is enough of them, and if a comb of brood awaits them, they will soon be all right. If you have *no* other movable comb hives, you will have to get a piece of comb containing brood, transferred as soon as you can. When you have taken all the combs out of the old hive, you will find many of the bees, and perhaps the Queen, clustered on it, or in a corner; shake them before the entrance; clear up every thing and you are done. If robbers begin to trouble at any stage of the proceedings, cover up every thing except the comb you are cutting, with cloths; if you are much of a novice perhaps you had better do this any way. The greatest danger from stings will be from robbers.

We consider transferring, well done, only when the bees keep right on with their work, bringing pollen, etc.

The whole operation should not occupy, to exceed one hour. We presume many of our friends will have colonies this month that will need more room than a single story will afford, and the following is just at hand.

If an Extractor is used would it be better to use Hives single or double?

Atwater, O. April 7th, 1874. JAS. MATTOON

With the present heavy testimony in favor of extending the combs horizontally, and the greater convenience in handling the combs for the Extractor, we would advise the double width hives. If you have two empty hives, make them into one of double width as advised on page 43; lift the combs of the colony into this; keep building them out by inserting combs as before, and proceed in the same way with the rest, as they demand more room. If you have the Simplicity hives you can use the upper story as well as the lower, for they are precisely alike; but with the ordinary two story hives 'tis more difficult; however, if you have no money to spare for new hives, and plenty of time, it may be managed, but we fear they would present rather a sad appearance.

In regard to the manner of feeding, we do know that it matters materially. To go around to 50 hives daily is quite a task, and one we cannot really recommend unless the Apiarist has nothing else to do. We last season arranged cloth feeders in every one of our hives, in such a manner that they could be filled from a Coffee-pot, without opening the hive; but even then 'twas a "back breaking" routine. If you have no sealed combs from stocks that have died, (*we* are very fortunate in that respect) give them a tea-kettle feeder full, during a warm spell and then close down the quilt again. It will do no harm if you keep them supplied with an empty comb, at intervals.

Feeding in the open air, is by far the least trouble, and is, we believe superior to all other methods of stimulative feeding, providing you have no neighbor's who keep bees, except such as will join in and feed too, or at least pay their share of the necessary expense. See "Open Air Feeding" on another page.

THE STANDARD HIVE.

FRIEND NOVICE:—As you are agitating the hive question somewhat, I will add my mite.

I have used several long hives the past season and like them better than any other hives I ever used, the most of mine are 30 inches long inside, in which I can place 20 frames 10 x 14½ inches, or I can insert fewer frames and place 6 small boxes on either side.

I think this size large enough for any swarm, I have tried some with the entrance in the end as in the New Idea, and others with the entrance in the side, and prefer the latter. Last season a medium sized swarm in one of these hives filled 24 boxes after June 12. Swarms wintered on their summer stands in these hives, and on natural stores gathered early in the season, wintered splendidly; while those swarms on which the Extractor was freely used, and artificial swarms made late in the season were very badly affected with dysentery in any kind of hives.

Knowersville, N. Y. W. D. WRIGHT.

We really cannot see why, the entrance may not as well be in one part of the hive as another, and in fact would suppose that by having it at the sides and thus saving them the task of going some little distance on foot, there might be an economy of valuable strength. However, as we have made no direct experiments of the kind, we of course should not decide hastily.

Our bees wintered well, but the spring is hard. We are doubling up considerably—killing the poorest Queens. We have 135 colonies, use combs 11 inches deep by 14 wide, hive 14½ from front to rear. We use division board—hives hold from 9 to 20 frames.

Border Plains, Iowa. G. M. DALE.

Doubling up our own colonies might have saved some, but as some that we should have doubled are doing finely, and some that we should not, have done badly, and as there is considerable risk of having Queens killed by so doing in the spring, we can hardly think it advisable after all. Our friend's frames are just ¼ inch longer than our Standard, and ¼ less in depth. Such is, not life, but, American Bee-keeper's frames and hives; all good without doubt, but no uniformity.

Think I have now decided to retain my Am. frame, after ripping off the projections of top bar with Buzz-saw, and put them into a hive like your "Standard." Have made and sold the Am. hive for 3 years in this vicinity, and that would be a strong reason for me to still use that sized frame.

Farina, Ills. T. P. ANDREWS.

Had we the Am. frame, 12 x 12, we think we should retain it.

DEAR NOVICE:—My frames 12 x 12 are not divided by cross bars, as you suppose in your answer in GLEANINGS for March. They are my old Debeauvoy's frames mended a la Langstroth; therefore no wood across the combs interfered with the laying of the Queen, which was greatly superior to that of any Quinby hives.

I see that you now think the size of the new Adair sections better than that of the Langstroth frame. I would prefer larger frames, especially if I intended to dispense with two stories. For ease of management it is more speedy to lift 8 frames than 11, let me also tell you that a Quinby frame, when full, never weighs more than 10 lbs., so that a child, or a young lady, can very easily transport them. If I were to start an apiary, I would prefer frames 16 inches long and 12 wide, *inside measure*, and I think that if we had to establish a Standard that measure would be the best.

In the March number (1873) of the French Bee Journal, *L'Apiculteur*, a bee-keeper is said to have counted more than 5000 eggs deposited daily by a Queen. The hive used had 14 frames sixteen inches both ways. I have never been able to get more than 3700 eggs daily, I think therefore that the large surface of the combs had something to do with the increased laying.

Who will decide about the American Standard? My opinion is that we will have to get the advice of those who have used several sizes on a large scale; and not to imitate the Italian bee-keeper's, who were so hasty in that matter.

Hamilton, Ills. CHAS. DADANT.

We have no doubt but that a large comb surface is an advantage to a heavy colony, but if the combs are carefully watched and an empty one interposed at the proper intervals, we think the difference would be but little. If we use a comb much broader than 13¾ (*our* standard) 'twill be difficult making the cover and bottom of a single board; also with the long hives we shall, when operating them, have to stand at the side, and to get hold of both ends of the comb will, if the comb is very broad and heavy, oblige us to stoop over in a way that is very tiresome. In calling this our Standard, it is not with the expectation that all will adopt it, only that some who can commence as well as not on a "beaten track" will do so. Orders are sent us for frames of a multitude of different dimensions, but there seems to be more of a disposition to centre about (as it were) 11¼ x 13¾, hence *we* adopt that as a standard. If the mass of Bee-keeper's demand a larger one for a Standard, *of course* we shall agree to it.

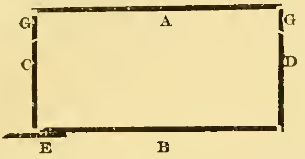
The Langstroth and American seem to be most in use, but they are so unlike, that the use of both, in an apiary makes much confusion. As we have given several appeals in favor of a larger frame, we will listen to one of the advocates of the other extreme; and friend Davis is a successful Apiarist, so far as honey is concerned at least, as we happen to know.

Hurrah! our bees are all right with two exceptions, one lost its Queen, and the other is rather light. This is better than I ever wintered before. By the by I have wintered one Queenless stock, in tip-top condition, they have raised a Queen this spring. My frames are 11$\frac{1}{4}$ x10 inches, this will be my Standard size hereafter as it gives me power over my bees that a longer cannot give, it also gives me the New Idea principle, which is old to me, let Adair say what he pleases. I will use it with the entrance at the side of the hive the whole length; which, with what we give above, makes the best ventilator in the world. Bees live longer in my hive than in any I ever used before.

Delhi, Mich. April 10, 1874. J. L. DAVIS.

OUR STANDARD HIVE,

we make as follows:



The diagram above, is drawn on a scale of $\frac{1}{2}$ inch to the foot, and the lines are supposed to represent a section of the $\frac{7}{8}$ dressed, boards.

A, is the cover 16$\frac{3}{8}$x30; B, bottom-board 15$\frac{3}{8}$x28$\frac{1}{2}$. The one inch less in width, is to allow the side boards to lap over and cover the joint in the same manner as does the back end board as seen at D, for the lower edges of both back ends and sides, are rabbeted out $\frac{7}{8}$x$\frac{3}{8}$. Before nailing in the bottom-board the front end is to be beveled as seen in diagram, and then it is to be nailed very securely to door-step E, which is 16$\frac{3}{8}$x6, and beveled on its front edge, also. The front board C, is like D, except that it lacks the rabbeted edge, being therefore $\frac{7}{8}$ less in width, that is, 15$\frac{3}{8}$x-14$\frac{1}{8}$ in width; this allows the triangular blocks, when placed on the door-step, to be pushed back under the edge of C, until they strike back against the sharp edge of bottom-board B. E, is to stand directly on the ground, or at least on a thickness of saw-dust sufficient to keep down weeds, and to keep the rest of the hive up to the same level, we nail strips 1x$\frac{7}{8}$, clear around under the bottom-board, and just flush with its edges. We hardly need repeat what we have said, about rabbeting clear around the under side of the cover, and nailing in the square frame, made of the strips G, G, and similar ones sawed off the sides of the hive; as this has been given in previous number. The manner in which the cover shuts on a bevel to exclude rain, is seen between G, C, and G, D. We prefer the entrance below the top surface of the bottom-board, because it thus excludes driving storms and wind. When the blocks are in place, 'tis true some rubbish such as dead bees etc., may accumulate behind them; but if they are occasionally removed as they should be, this will do no harm. Several inquiries have been received like the following:

In making Long Hives to hold 20 or more frames, if the bottoms are nailed fast will they not need an opening in the bottom covered with wire cloth for ventilation? or rather how much ventilation will such hives need in hot weather, whether nailed fast to bottom or not, and standing in the sun?

Manalapan, N. Y. Mar. 30, 1874. CHAS. H. RUE.

If the combs are kept under careful supervision as we have advised, we think no more ventilation will be needed than is given at the capacious entrance, when the blocks are taken away entirely. We should never think of allowing a strong stock to remain entirely unshaded. We think examination will show that the ventilating holes covered with wire cloth are invariably waxed up by the bees very soon, and are therefore useless.

Any opening not covered with wire cloth is used as an entrance, and when closed, makes them trouble and confusion. It is our opinion, that too much ventilation, has produced more mischief on the average, than too little. We would advise those who are in doubt, to try both extremes and see what the effect is on brood-rearing. Keep the hives shaded in the hottest weather, by all means, but until about the time your grape vines leave out, we think it almost impossible to give them too much of the sun's heat; and also almost impossible to give them too little ventilation.

Reports Encouraging.

MY bees are all right so far, I have not lost a single colony from 86 which I am wintering, all on Buck-wheat honey. I sold 1100 lbs. of honey last year at an average of about 20 cts. per pound, and increased from 49 swarms in box hives to 86 in "Simplicity." Castalia, O. April 1st. N. E. PRENTICE.

My bees are wintered all in good condition, except the one which had dysentery, it being Queenless, and another that is a drone layer. They have all wintered on sugar-syrup not sealed, and fed all through the winter; perhaps no man has ever disturbed his bees so much; they cleansed, the 15 of March, I shall feed on sugar forever. Wequiock, Wis. J. DUFFELER.

Our 40 stocks are now reduced to 34. Fortunately we have lost but one choice Italian as yet, and even then (April 9,) we found the Queen alive on one of the combs, and surrounded by a handful of her bees. We removed the comb, bees, and Queen, and carefully inserted the same in the center of a stock of black bees that had been Queenless two or three days. Perhaps this was an act of audacity, but to-day her new subjects resumed work on middlings, and an examination inside the hive revealed Her Royal Majesty at her legitimate business—O. K.

Koshkonong, Wis. April 14, 1874. D. P. LANE.

DEAR NOVICE:—Can report the successful wintering of 197 colonies bees. I removed the caps on upper story leaving top of hive open; with L. hive set aside caps, and left open two or three holes in honey-board, closing all downward ventilation. Wintered in cave and cellar, and found all in good condition upon setting them out quite recently. A neighbor put away 66 swarms within few rods of me in same way, only leaving *downward* ventilation, also, all wintered well and seem to be in good condition now.

Onawa, Iowa. April 8, 1874. AUG. CHRISTIE.

All of my 90 colonies of Bees came through the winter safe, and some of them stronger than common at at this season. I had drones flying on the 19th of this month, three weeks earlier than I ever saw them before. Cornersville, Tenn. March, 1874. ELI COBLE.

Bees have wintered finely on natural stores, lost none—no dysentery--winter very mild. They gathered pollen in Feb. from alder.

Mitchelsville, Tenn. H. PEDEN.

Bees in the best condition. All alive—no dysentery, and working on the fruit trees as only the industrious bee can work. DR. W. P. MOORE.

Richland Station, Tenn. April 6, 1874.

Took out my bees Tuesday. Lost two; the balance, 46, consumed five and one-third lbs. honey on the average, per colony, for four months. J. CRALL.

I did not get my bees out of the cellar until the 10th. My 34 stands and 5 of my neighbor's (put into my cellar) came out all right. Six of my four frame Nuclei were all right—two had run out of honey and starved.

Grandview, Iowa. Apr. 16, 1874. W. J. RONALD.

EDITOR GLEANINGS: We have taken away the manure, so that the sun may shine directly on the hives, (as you have so often recommended) and our *twenty two* colonies have nearly all been bringing in pollen for the past two days. Some of the strongest, (!) have actually got brood in *three combs*. April 21st. *Novice.*

PROBLEM NO. 21.

I WISH you would include in my former order a box or hive, whatever you may be pleased to call it, for carrying frames of honey from the Apiary to the Extractor and back. I think on the whole it will be best to have two small ones, rather than one large one—to hold five frames each. I want the tops so they can be fastened tight, with the idea of having a handle in the centre of each cover, so as to carry them like two pails of water. I think perhaps it had better have a movable bottom-board to be fastened by hooks, for convenience in cleaning it of the drippings of honey. You must have the idea now of what I want and you may make to suit yourself. Make them of as thin lumber as you can and have them strong enough, so that they may be as light as possible. For the same reason they had better be made of white pine, or basswood.

Cedar Creek, N. J. E. KIMPTON.

Our friend seems to have a clear idea of what is wanted. At first we thought of making something such as we described in Vol. 1, page 52, but after studying on the matter, finally had our tinner make two, square, tin pails, with a ledge to hang the frames on, and a hinged cover that would open under the bails. Mrs. N. says nothing can be cleaned of honey drippings so readily as tin, and as they were soldered tight they can be used to hold honey etc., in an emergency; if properly cared for they would last a life time. On the other hand, although they were made of the lightest tin, with cover and all they are rather heavy, and still worse the expense of the two was about $4.50. Have we no basket makers among our readers who could make us a light square basket for the purpose?

A shallow tin dish might be placed in the bottom to catch drippings, and a cloth to be thrown over the top, could be sewed to the back edge. The handle should be very high to allow of lifting out the combs readily, or might be made to turn over; we rather think the former, as it would not necessitate so much stooping. Perhaps something arranged entirely of wood and cloth would be the thing. Who can get up the lightest, strongest and cheapest implement, and one readily kept clean, to hold five combs?

BOTH SIDES OF THE QUESTION.

MESSRS, A. I. ROOT & Co.:—We did not intend our communication for publication. We have discovered that some of our hives to which we had given Italian Queens last summer, contain this spring, crossed Queens. Our native Black Bees very seldom cast swarms in the fall, and hardly ever casting more than three swarms. Some of our hives had sealed drone brood the 1, of March. The expenses of our Apiary are as follows:

Langstroth's book on bees,	$2.00
4 box hives	12.00
30 L. hives. (cannot be made here less than $5.)	150.00
Painting, Hinges, and Locks, (Local necessity,)	12.00
3 Italian Queens	11.50
Royalty,	12.50
	$200.00

Realized only 450 lbs. of honey, we used the Honey Extractor on 20 hives last June, the average yield, one gallon to the hive. We extracted all the combs—have bought no patent hives. So far as we have read Apiarian writers, we selected the best hive—our error is in changing the Native Bee for the Italian.

Macon, Ga. J. A. NELSON & SON.

FRIEND NOVICE:—You are right in your statement that Mr. Quinby asks two prices for his bee hives, but you certainly put the average very low indeed. Mr. Quinby says, "it is safe in a *good* season to calculate on an average of one or two hundred lbs. of box honey, or two or three hundred when the combs are emptied with a machine." An average of 200-lbs. *box* honey *I* should think too *much*, but if I can't average 150 lbs. *comb* honey in small *frames* placed in the large frames at the sides of the brood combs (with black bees too) then it is because it is a poor season, the average of Extracted I will put at 300. Last year was about an average season here, not a *good* season by any means; clover, Poplar and Bass-wood yielded very little honey, Buck-wheat and Golden rod did not do very well. I commenced the first of June, with ten weak stocks in box and American hives; transferred them to Simplicity hives, frames about 10 deep by 14 inches long, inside measure. I averaged 200 lbs. ext'd honey, at least ¾ of my honey was Buck-wheat and Golden rod. Besides the 2000 lbs. of honey, I increased to 30 and saved 27, three of them swarmed before I commenced using the Ext. and flew away, so I lost at least 300 lbs. there, besides the bees; so much for box and Am. hives and poor management, but I've got my eyes open now, though not so wide open but that I intend to see more and learn more of this interesting and profitable pursuit each year, as long as health permits me to keep bees. I suppose the seasons have been so *very* poor with Novice of late, is one reason he is so "modest" about giving the average yield of honey per stock at 50 lbs. I know we should not expect too much and ought to be satisfied if we only average 50 lbs., but Novice certainly can average 300 lbs. ext'd honey in a good season; if he can't then the trouble is in 4c. Queens, I don't know what else. I only had one Queen that I could call poor, and I got one hundred lbs. of honey from it, (the stock of bees) and a lot of drone comb and drones in August. Theory says bees build less drone comb with young Queens than older ones, but I have had the most drone comb with young Queens.

New Buffalo, Mich. Mar. 10, 1874. R. S. BECKTELL.

OUR OWN APIARY.

ALTHOUGH the weather has been quite cold, and the season backward; although we have not as yet, seen a bit of natural pollen, and we never remember a season before when it was not gathered abundantly by April 1st; and although we have lost 27 colonies and have only 26 remaining, this 13th day of April 1874, yet we cannot give up that bad weather *should* be any excuse for such losses. We have nothing to reproach ourselves with in the way of carelessness or negligence this spring; but on the contrary, have done the very best we knew how.

Many are the kind letters of sympathy we have rec'd, (and we heartily thank you all for it) and many are the reasons suggested for their dying; a few have said it was just as they expected, when we started into winter with so many weak colonies. But the weak colonies, some of them, are doing well, and our strong ones have perished, why is that? Some have suggested that the manure kept them too warm; such may be the case, for we often find only a dozen or two bees guarding the entrance, and the dead colonies are found almost invariably to contain only a very small cluster, scarcely larger than an egg, or an apple, and strangely we have not found a *particle of brood* in any of those deceased. They died in the midst of clean white combs, and sealed stores. No trace of dysentery.

It is true some of the strongest have worked on the meal during weather that bees do not usually fly, yet we have seen no bees dead on the snow, and they have flown many days when it covered the ground.

We do not believe artificial heat alone, will help the matter, for to test it more carefully we placed a Queen with what was left of her subjects—just 82 bees in all—in our Lamp Queen nursery of last year, and they have now been there a week. We have kept the heat constantly at a summer temperature, and the bees and Queen crawl to all parts of the hive at pleasure, but there are no eggs, and no brood-rearing; something besides warmth must be wanting. To be sure many will say, she can't lay eggs, and brood can't be reared without more than *eighty-two bees;* but why? her whole hive is kept as warm as the centre of a populous colony in June.

Again; the combs of the hives from which the bees had died, almost without exception were destitute of pollen, see problem 12 and 13 last year. No one has yet applied for the $5.00 although several have suggested, corn-starch, corn-bread soaked in honey etc., etc., and our "Ambrosial" friend Flick *gives* to *B, K. M.* a recipe for "bee food" composed principally of corn-starch. As it is not so *very much* trouble to *try* the experiment, we made a small heap of corn-starch, in the rye and oat-meal in our feed house, and they seem to dislike it more than any of the various substances with which we have experimented. We wonder if it ever occurred to Mr Flick and some others, to *try* whether their receipts are valuable.

How can we supply bees with pollen in the spring, that brood-rearing may proceed when the weather proves unfavorable? Have some of our readers a Green-house or conservatory, and does any one know of an experiment ever having been made to see if bees will fly out and regain their hive again, in such a place?

If so, they would certainly work on rye meal, and thus enable us to be independent of bad weather. The bees we have lost this spring would pay for one large enough to make the experiment, and if it cannot be demonstrated otherwise, we have a strong fancy to see for ourselves what can be done.

Some friend suggests that a field of hemp would furnish pollen enough, and thus enable them to keep a supply over winter. We strongly suspect this lack, is one of the drawbacks in our locality, and may possibly be in others also. Friend Hosmer says in *N. B. J.* that he thinks the great advantage of the Western over the Eastern States for bee culture, is on account of the greater abundance of pollen yielded.

April 16*th*—A part of the day being somewhat warm, a little natural pollen was gathered. Two more colonies are dead and no favorable change in the weather yet. After the 82 bees in the Lamp nursery had dwindled down to *nine bees*, we sent them Queen and all in answer to an application for the "cheapest queen we could furnish, hybrid or otherwise." 'Tis our first sale of queens this season and bids fair to be our last also.

April 20:—Although yesterday was Sunday, as it was the first really fine day since March 2nd, we, and "Blue Eyes" anxiously watched the remnants of our Apiary's laborers, as they brought in the different colored loads of pollen.

The manure had been removed from a few of the hives, and we were curious to observe which would commence work soonest. Sure enough, the warm sun shining directly on the tops of the uncovered hives, sent them to the fields. an hour earlier than the rest; the manure having the same effect as double walled hives, since fermentation has ceased.

Several more colonies were found so weak that they had to be broken up, and worse than all the rest, our Argo Queen is among the missing; we would not have sold her for $25.00.

We noticed about church time, that the bees were very feebly resisting the attacks of some black robbers; and, although they had been working briskly on meal but a few days before, an examination showed very few bees, and *no queen.*

Another colony about the same time, showed symptoms(individual bees whirling around excitedly, at the entrance)of swarming out (they have, once before) although they had a fair number of bees; these, were given a comb of eggs and some pollen from another, and after that, abandoned their project. All the stocks that have failed were found nearly or quite destitute of pollen, and *none* contained eggs or brood. The manure answered perfectly in keeping them at an even temperature, above freezing, and vegetation was found to have started briskly, about and beneath the hives, when the manure was removed. The few lines below just received from Mr. Curry, will probably explain *why* the manure answered, in place of warm weather, in *his* experiment, and has not in ours.

Pollen seems rather scarce, on account of the severe frosts I suppose. I am not sorry, as it gives them a chance to *clear out the old pollen* from the combs.

We cannot remember to have seen any old pollen in the combs in the spring, for the past three seasons; last season we looked over more than a hundred combs before we could find just enough for a simple experiment. What shall we *do* for pollen when we have weather like that of the past six weeks?

P. S.—We didn't go to church last Sunday, and it is to be feared we were not in a very "devotional" frame of mind either, at least a part of the day.

CHEAP PAINT FOR HIVES.

You advocate all economical articles and processes, what do you think of the cheap paint recipe given in Winder's circular? I find the same recommended in Robinsons "Facts for Farmers."

J. H. Martin, Hartford, N. Y.

We think of it as we do of many other receipts given by thoughtless people because they had "heard 'twas good" but never once thought of trying it themselves. As a white-wash, it may do very well, but if we really would protect lumber from the evil effects of moisture, the wood must be thoroughly treated with good *oil paint.* The cheap paint will not stick unless it be used on rough, undressed boards, and we do not think it possible to make hives sufficiently accurate of such material.

We once made 50 such and used them several years; the paint adhered very well, but the boards warped and drew the nails out, nearly if not quite as bad as if unpainted. After they had been in use three or four years, we in desperation nailed them over, and then wasted more good oil paint on them in the attempt to make the old weather beaten wood impervious to water, than they were all worth. The Simplicity style of hives, requires but little paint, and their form offers every facility for giving them an additional coat whenever they may need it, as they remain on their summer stands. One coat at first, on new hives will do very well.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS
MEDINA, OHIO.

Terms: 75c. Per Annum.
For Club Rates see Last Page.

MEDINA, MAY 1, 1874.

A. B. J., for April came to hand *March* 31st; *B. K. M.*, April 5th, and *N. B. J.*, April 18th, all in good time, and all excellent.

Up to this date, half past one o'clock April 27th, the *World* has not yet shed its "mellow" light (as *B. K. M.* has it) upon us.

◆

WE omitted to mention that the dimensions of the side boards for the Standard hive, were 15x30, that is, the dimensions of the board before the strips are ripped off to go under the cover.

◆

WE learn R. Wilkin, family and employees, have removed from Cadiz, O., to Oskaloosa, Iowa, where they expect to engage extensively in the honey producing business. May success attend them.

◆

WE would refer the many who write to us for tested Queens, to Mr. Cary, whose advertisement will be found in this No. He is not only one of the pioneers in the business, but so far as we know, has been prompt and trustworthy in all his dealings in years past.

◆

WE have just succeeded in making a Queen-cage both for shipping and introducing. 'Tis all of metal, is stronger than the wooden ones of last year, will hold securely an abundant supply of food, requires no paper stoppers and and can be closed and opened quickly; yet has no loose cover, nor anything to get lost. Diagram and directions will be given next month, that will enable any tinner to make them.

Price 10c., or $1.00 per doz. By mail, 2c. extra.

◆

So invariably do we get both favorable and unfavorable reports, from almost every locality, we hope we are excusable for concluding that there *is* no very great difference in locality after all.

If any thing, our Southern friends seem a little behind, but we are inclined to think the main trouble is, that they have not yet given their bees a chance. 'Tis not unfrequent to hear of an enormous yield in the midst of a neighborhood complaining bitterly of bad seasons, and nothing for the bees.

Therefore be of good cheer, for "we shall (most assuredly) reap if we faint not."

HOW TO WINTER 100 COLONIES WITHOUT LOSING ANY.

THERE! there! don't be hasty, we know very well *we* can't do it, and therefore take pleasure in introducing to our readers *Mr. James Bolin* of West Lodi, O., who will occupy the "Editorial Chair" (not a word of remonstrance friend B.) while we——ahem, sit by *Novice* while he interrogates.

FRIEND B., we shall recognize you as undisputed authority, on the ground that "the proof of the pudding etc., and would like to be inquisitive somewhat.

In the first place were your colonies all strong in the fall? how many combs would there be bees on in Oct?

No. Some of them were what I call weak, others very strong. The bees occupied from four to seven spaces between the combs in common colonies; and I had a few extra strong stocks in which the bees covered all the combs.

These extra colonies had been transferred, on the approach of winter, from double width hives containing 21 frames, to common ones having 10 frames. There were more bees in them than was desirable, but not liking to kill any of them, I concluded they might take their chances. The result was, a great many more bees died in them, and the consumption of honey was much greater than in the ordinary swarms.

Did they store honey in the fall, and how late?

They stored honey from a piece of buckwheat I had sowed, until the latter part of Sept., and from golden rod and other fall flowers, from the time the grass-hoppers disappeared, until we had severe frost.

Are there any cider mills in range of your bees?

There is a small mill at which some cider was made, a trifle over half a mile from here. The nearest large mill is about two miles away.

How thick are the walls, and what are the dimensions inside? how are the doors fixed?

The walls are fourteen inches thick; two thicknesses of inch boards and twelve inches of sawdust. Two floors with nine inches, between them, and there are ten inches of sawdust on the ceiling overhead. Dimensions 13 x 21 feet, and 8½ high inside. A window in one end, with sash and glass, and a blind both inside and out, thus having two dead air spaces; double door in the other end, with 12 inch space between.

How are the ventilators arranged?

There is a ventilator ten inches square, through the floor, near the center of the room. It is closed by a slide that can be opened or shut from the outside. In the house it is covered in the winter with a box, made by nailing three boards together, that extends almost the length of the room. This is placed loosely on the floor, with the open side down over the ventilator; and the sides of it are bored full of holes to distribute the air equally. In the summer it is put in the attic out of the way. Over head there are two ventilators, six inches square, that extend from below the ceiling to three feet above the peak of the roof, and covered so as to exclude light and rain.

Did the temperature ever get down to freezing in your hives?

No; thirty six degrees was the lowest point reached, and the temperature varied from that up to fifty degrees. I would keep it at from forty to forty two if I could do so.

How are the hives prepared and what kind? Langstroth if we remember.

In preparing for wintering, I aim to have empty comb near the center, for the bees to cluster in, with their stores at the sides and back end of the hive. When handling the combs in the fall, I generally cut holes in them, about one third of the way down from the top, for winter passages. I take the honey boards off, put on bee quilts, and contract the entrances to one half inch, or less, but leave them otherwise unobstructed. The caps are left off, and hives piled up four or five deep, as the legs on the sides of them just fit where caps rest, when on. I use Langstroth's hive.

You of course have tried "sugar diet," what difference do you find in the appearance of such colonies if any?

I have some 15 or 18 colonies to which I fed sugar syrup. One of them had I think, more dead bees on the bottom board than any other stock, except those extra strong ones transferred from the double width hives. In other respects I could see no difference between those wintered on syrup, and those having natural stores. Many of them did not have much, if any more than a spoonful of dead bees in their hives, when taken out of winter quarters.

They are breeding fast now, the weakest having brood in all stages, from eggs to young bees hatching out.

I neglected to state in the proper place, that although those extra stocks are still in good condition, they are no better than many others that contained not more than half as many bees in the fall.

We are called to lament the loss of one colony, since putting them on the summer stand. During the cold weather that occurred last week, a medium sized stock starved, although they had two frames of sealed honey. They had clustered at the south side of the hive, which stood facing east, and the honey being at the north side, the cold north wind prevented their reaching it, and so they perished. "'Twas a sad case," but one for which wintering is not responsible.

And how about the *pollen?* Your bees certainly had pollen in the combs as they could not—Halloo! The chair is empty, (is it any wonder?) and our friend is gone; but we'll make him tell next month, see if we don't.

SUGAR SYRUP VERSUS HONEY, FOR WINTERING.

FROM P. H. ELWOOD, STARKVILLE, N. Y.

IN *A. B. J.* for Dec., Vol. IX, Mr. Quinby writes:

"Novice, and other writers, claim that syrup of sugar is a preventive, and will save the bees from dysentery. I wish there was nothing to disprove it. Mr. Elwood, of Herkimer Co., in this State, fed several stocks that were destitute, one year ago, with that alone. They were badly affected with that disease, just the same as those having their own honey, and exposed to the cold the same. I fed a colony with loaf sugar, that, when exposed as others were, was affected the same."

Now, without in the least disputing the great value of Mr. Q's articles on wintering, we would ask him to reconsider the matter after reading the following. Has he not been too hasty in pronouncing sugar stores *no better* for wintering.

FRIEND NOVICE:—Your request for further particulars of the sugar fed bees, is at hand.

At the suggestion of Capt. Hetherington, in the fall of '72, we extracted all the honey from our thirty-five colonies and fed each thirty lbs. of sugar syrup, made from twenty lbs. of A coffee sugar. A small quantity of cream of tartar was added, but this is probably unnecessary. As there was a delay in getting sugar they were not fed until Oct., and consequently did not get all of the syrup sealed. This feature we deemed unfavorable, but hoping that it might cause no trouble, we packed chaff on four sides and tops, and left them on summer stands. Result as Mr. Quinby stated—"badly affected with dysentery." Some dying, and nearly all weak. The unsealed syrup gathered considerable moisture, so much in the first swarms that died, as to bulge out beyond the surface of the comb. To vaporize this extra quantity of water, a large amount of heat would be consumed, more probably, than the bees could generate.

We can throw no light on the statement that our sugar fed bees wintered no better than those with natural stores, except to say that Mr. Quinby evidently misunderstood us on this point. We had no bees with natural food, and there are none such in our field, packed as we have described. Compared with natural stores in a well kept cellar, (Quinby & Root's for example) honey comes out far ahead. Compared with the ordinary cellar within range of our bees, sugar was more than four hundred per cent ahead. Compared with hives as much in the sun as possible (a la Novice, when not in frost proof repository) or made the Nuclei of snow banks (a la Prof. Cook, Gallup, Doolittle and others) sugar came out more than 10,000 per cent ahead, and you may add as many ciphers as you please, for there was not a single swarm left within the range of our bees. And this in a section where hundreds went into winter quarters. Over two thirds of ours were saved, and that with a good deal of bad management in the spring, for the writer is a novice of but a year's experience.

I think (partner out, here, although he may agree) that sugar is as good for wintering as the best honey, perhaps *better* where bees are long confined, as it is a more concentrated food. If this be so, Gallup thinks the Creator has made a mistake in providing for bees. I think that honey is perfectly adapted to the requirements of bees in latitudes where they are indigenous, but when carried to Siberian winters may they not require a more concentrated diet? Does Gallup leave his domestic animals to the food provider by nature for the winter months, or does he sow and gather, and thus improve on the processes of nature?

I think it better to feed more slowly than you recommend; four pounds per day, for fifteen days even where no brood is raised, being better than thirty pounds in one day.

We started the present winter with 194 swarms. Put 100 into a modified Hibbard clamp, large enough to go inside and see how they get along, the remainder on summer stands.

We are wintering 50 swarms on sugar the present winter, most of them fed in Sept. A part out doors, those are all alive. Can't report those inside yet, haven't had an extended experience, but so far have observed nothing but that harmonizes with the Quinby theory, that cold *usually* kills the bees.

We are using Quinby's hive, which I think is not only the best frame hive for out-door wintering, but best for in-door also, the best for extracted honey, the best for box honey, the best for convenience in manipulating, killing as few bees as any, and finally can be built, if you are satisfied with a cheap hive, cheaper than the cheapest Simplicity hive. All of which is respectfully submitted, especially the last.

DEPOSITORY OF BLASTED HOPES,

Or Letters From those who have made Bee Culture a Failure.

MR. GLEANINGS:—We have only 22 colonies left out of our 57, and almost every day is cold, and to-day 'tis both cold and wet. Shall we *buy* some more? If not, what shall we do? Despondently, *Novice.*

Don't buy any bees, so long as you have a dozen left. Summer *will* come, bye and bye, and then you can show us how fast you can build up. That you cannot winter bees, is very evident, and unless you can show us that you *can* summer them, we shall have to conclude you are no bee-keeper at all.

MANURE ON THE BRAIN.

DEAR NOVICE:—You're a goose! Do you think you can put a pile of manure around a bee hive in the fall and have it keep up heat by fermentation till spring? When the fire burns out won't the hive get cold?

But for all that, GLEANINGS for April is a splendid number. Chicago, Ill. C. C. MILLER.

Now friend M., that's all theory, (your latter observation, not the one about Novice) for did you never observe that the ground rarely if ever freezes under a very slight covering of stable manure, say six inches? If you think we haven't any facts to "fall back on" just read the following: Supposing it does get cold; if it keeps the ground from freezing would it not keep the hive at a low, even temperature?

DEAR NOVICE:—Vol. 2, No. 3, is at hand, and as I see you have manure on the brain, I am willing to give my experience in wintering bees in manure. I commenced more than 10 years ago to winter bees that way, though not on the principle that the German lady puts her cheese in the manure pile to cure, or as your wagon load of manure would be to keep them hot, but to freeze them in. I have never failed when I put them up in good season and paid proper attention to them. I put up a late swarm that was so light that I thought they were not worth destroying for the honey, or wintering for the bees, but as an experiment I did it; they came out all right and made a good swarm. Thus; place the hive on the ground in a suitable place where the water will not settle around them, with the front south. Take long damp manure that will freeze solid, and cover three sides and top, not more than one foot thick at the bottom, and less at top, then take a wide board that will cover the front of the hive when set considerably slanting (so as to give a good air chamber) then cover that up the the same as the rest of the hive; disturb them no more until the first pleasant day (with the mercury at 40°) after the middle of March, then remove the front covering and give them a good flight; you will see them fairly dance. After they have all gone in, set the board up in front of the hive to prevent the sun inducing them out in unfavorable weather, and remove the top covering and commence stimulating, using plenty of quilts. What bees want is a long sleep, a strong sleep, and a quiet one. There are more bees cooked to death than are frozen to death, nowadays. B. I. TALBOT,

Viola, Iowa. March 1st, 1874.

EARLY QUEENS FROM THE SOUTH.

DEAR NOVICE:—I think you are mistaken in saying that Miss Anna Saunders can sell all her Queens. Too many, learned in everything but Bee lore, who are opposed to progress and reading, even denying the Queen bee story, would be slow to believe the large yields of honey that can be had here, even though they saw it. One Gent. could not take GLEANINGS, but could pay $30.00 for 3 patent moth trap hives, who of course must fail for want of 75 cts. worth of other peoples experience. I am sorry to go to "Blasted Hopes." Do help us.

Simplicity hives made last spring of hard pine, stood all summer and fall all right, but have warped all to pieces this spring. Bee quilts almost rotten, frames and under side of hive mouldy, combs nice; am now using for quilts single thickness of new Brown Domestic, is it good? Will paint straighten my hives or prevent their warping in future? How can I clean paint and varnish brushes, and keep them ready for use? Can you furnish Buzz Saws, Table Guages etc. for making Simplicity hives, and the price? Lost 3 colonies bees, very strong, all 10 combs filled with brood even in the corners, March 20th. They brought in honey March 10th. but incessant rain and cold winds ever since. Nary drop of honey in the hive. Other bees are now cleansing their combs of offensive brood.

Wintered on natural stores on summer stands, no disease, only starved by sudden check of honey and large family to feed. I had Queens fertilized every month of the year except Jan. I fear there is no market South for honey, I took 40 lbs. premium honey to State Fair, got no offer for it. Have advertised Queens in State paper at $1. and $3., and nary order. I fear 'twould not pay trouble and freight to ship honey to Chidago and don't want the sleepers in my house broken with tons of honey, for I'll surely beat your last year's crop *any year*, I think.

Wife says my bees will starve us yet, for I give all my time, talk and provisions, to my bees and bee friends. Am out over $300.00 cash, and took in nary cent. Italians very far aheads of black in my hands.

Can rear Queens from Feb. to Dec., don't see why all will not be pure with no black bees within a mile of me. Please tell me minutely how to ship them safely and cheaply long distances, as I wish no Queens lost by my ignorance. W. F. STANDEFER,

Dry Grove, Miss. April 13th, 1874.

If Queens can be sent safely to the North, and we haven't a doubt of it, there is a market for *ten thousand* instead of one. A postal card from you dated April 13, was in our hands the 16, and Queens might go nearly as quickly. Our cages of last season, although roomy and convenient, in several cases proved of insufficient strength, also in long distances, water in a sponge, dries out, as we prepared them in the fall, with a piece of candy. All things considered, we believe we would adopt the "Alley" cage for long distances viz: a block of wood about 1x2x3 inches; bore two holes in one side nearly through. These holes should be of different sizes, say inch, and inch and a half, and should cut into each other so as leave an opening between them of about ¾ of an inch. A piece of old, stout comb, containing sealed honey or syrup is to be securely waxed into the smaller one, and after the Queen with a dozen bees, young ones are preferable, is placed in the other, wire cloth is tacked over both.

Miss Annie should be able to get a carpenter to make them complete, for her, for 50 cts. per dozen; if 'twasn't for the "awful" express charges we would make them for her cheerfully. Any boy or man can make his own, rainy days and evenings. Sometimes a piece of sponge, saturated with honey is preferred, but we think it more expensive and no better.

We fear you did not "halve in" the corners and cover to your Simplicity hives, and nail them from both ways; when properly made, they stand the weather better than any hive we have ever seen, when used unpainted. They should always be painted, at *least* one coat, before being used. If your hives are not too bad, lift the combs and bees into an extra one, and take them one at a time and draw them up with nails, as well as you can, serving the next the same way and so on. They can be painted very well after the bees are in them. We think turpentine will soften your brushes. We always keep ours in the paint, and even if a little stiffened, we paint away until it gets limbered.

We fear our Southern friends, are *too* liberal. We have many letters like the above from those who are endeavoring to disseminate enlightened bee culture. Will those who have written us so many letters for "dollar Queens," *early in the season*, please send their orders to friends Standefer and Miss Annie. In that way we can aid them, and help ourselves too.

In a few cases, we have displeased, by using matter for publication not so intended. We may say that we regard all ordinary communications sent us on bee culture, as matter from which we are free to select, unless the writer makes a request to the contrary. We are also willing to keep back the names when so directed, but to secure notice, the full name and address must be sent us in all cases.

Heads of Grain,
FROM DIFFERENT FIELDS.

MR. ROOT, Dear Sir:—Of course you may put me down for the dollar Queens, and accept my gratitude for the suggestion and the kind offer that accompanied it. I assure you I do not need the least urging to induce me to lend hand, head and heart, to the advancement of apiculture, as far as my endeavors can promote it.

My bees seem to like nothing better than raising Queens, and I have no doubt I could easily raise 1000 or more, but I did not think of it till you proposed it. I thought my course would be to make as much honey as possible, and so benefit myself, the cause of apiculture, and the favorite bees at the same time.

There are only part of the Queens I now have, that I would be willing to sell daughters from. I intend raising plenty of drones from one of my best Queens this spring, and think with care, I can keep them through the summer and winter, and then be able to have Queens about whose progeny I will feel no hesitation.

Our winters here are almost nominal, in fact *this* winter, I have only seen ice *once*, and then only the least little bit. My bees are working beautifully—one of my hives is scented with an agreeable perfume now, coming from the pollen I suppose.

Last fall for about a week, a very nauseating odor hung around all my hives, I was quite alarmed at first, but noticed that the strong hives were most offensive, and every thing else appearing right, I concluded it must be from the pollen.

* * * * * * *

We *must* have a journal on Apiculture, in the South, our wants are so different from yours; *our* troubles are chiefly *summering*, over swarming, and insects, of whose annoyance you can scarcely form a conception there. MISS. ANNA SAUNDERS,
Woodville, Miss. Feb. 16th, 1874.

We regard swarming as only an indication of prosperity and as we have before remarked, like no better fun than the task of keeping the disposition under proper control.

We presume all will admit that, as a general rule, if the women undertake to rear Queens, we should be sure of getting of *them* only good honest ones, and as a proof of their ability to hold out, in any matter where they have arrived at a fixed *determination* to succeed, we have only to cite the glorious victories they have achieved over intemperance, in our own state of Ohio at least.

FRIEND NOVICE:—Do you think Blue Birds are enemies of Bees, do they catch them, if not are they any advantage by picking up the Moth Miller, would you encourage them about the Apiary?
Independance, Iowa. E. A. SHELDON,

We have never heard complaint of the ordinary Blue Bird, but consider the *Blue Jay* without doubt an enemy. At seasons when our Apiary is most populous, they are seen to hover about in considerable numbers as though attracted there from the forest. To prove that they really catch bees without doubt, they have been shot and dissected. Whether the damage they do should consign them to extinction or not, we are unable to decide. We dislike to kill birds, and would first like to inquire if they have not some redeeming traits. Can they not be frightened away from the vicinity by some means?

Could not the Nucleus hives be sent by mail? Every day I see packages of books etc., passing through the mails heavier than the hives would be.
St. Genevieve, Mo. MRS. C. C. ROZIER,

Printed matter and seeds, are mailable to the extent of 4 lbs.; other matter 12 oz. only. So many complaints are made of the losses in introducing Queens that we have been considering whether enough bees might be mailed with the Queen to build up a colony with the assistance of a comb or two of brood only.

By the way Novice, I wish the Bee Journals would stop publishing letters about feeding sugar syrup to bees in order to make more *honey*; there is hardly a month but we have an article on that subject now, in the *A. B. J.* In this month's number I see some one contends that sugar syrup is not honey till after it goes into the bees stomach and becomes *acidized*, it is just such articles, and such men, that hurt the honey business. I don't think that it makes honey out of syrup, any more than putting a piece of brown paper in my pocket-book makes a greenback of it. People don't want sugar syrup, even if it is *acidized*, and you have no idea how suspicious people are. One thing they think looks bad is, it is so *clean*; I tell them if a little extract of pollen will improve it I'll bring them some and they can add to taste, but here I am running wild; yet I can't help it, I get so mad whenever I hear sensible men, (otherwise) talk and write of increasing their yield of honey by feeding.
Cincinnati, O. April 2nd, 1874. H. E. CURRY,

Langstroth says in his book, page 275:

"That the honey undergoes *no* change during the short time it remains in their sacs cannot positively be affirmed, but that it can undergo only a *very slight* change is evident from the fact that the different kinds of honey or sugar-syrup fed to the bees can be almost as readily distinguished, after they have sealed them up, as before."

Now as this has been shown over and over again, and not one single practical experiment (so far as we know) to the contrary, are we not excusable in feeling somewhat as friend Curry does in the matter.

DEAR NOVICE:—A year ago I brought through three rather poor colonies, out of 19. Increased them to 8, which I put in the cellar in good condition, Nov. 19, and then left them for the winter. Dec. 10, my wife found the cellar damp and bees uneasy. She aired and warmed the cellar, when they quieted down, and the cellar and house were locked up, and not opened again till I opened it myself March 30. Of course I was quite anxious to know whether any of them were alive, and was surprised to find the whole 8 in perfect health, with not a quart of dead bees in all. "Well, what of it?" you say. Why, nothing; only can't you let a body tell you of a little streak of good luck after losing 60 colonies in the two preceding winters? Chicago, Ills. C. C. MILLER,

P. S.—My wife insists that she deserves the credit of saving the bees, by warming and drying them in Dec.

We agree with Mrs. M. and think the bees in future should be considered her exclusive property.

I have a shed 6 ft. high in front and 5 ft. in the rear, boarded tight on three sides; on the south side, I have heavy muslin curtains that can be rolled up or let down at will, according to the weather. My bees are strong and work busily on rye flour every fine day. I wish you would give a piece in GLEANINGS about robbing.
Shimersville, Pa. L. N. KERN,

We once heard of a Blacksmith's shop belonging to the Am. Watch Factory, that had *white* window curtains, but we never before, that we remember, heard of curtains before bee-hives. As this gives them the full benefit of the sun whenever it shines, and keeps off all cold winds and storms, it may not be a bad idea, if the Apiarist could afford to be on hand to "pull the strings" when advisable.

A PIECE ABOUT ROBBING:

Well here goes; robbing is bad; bad when your bees rob each other, worse when they rob your neighbor's bees, and still worse when your neighbor's bees rob your own hives.

For a remedy, keep none but honest bees, *i, e*, those that have never learned what it is to get sweets from any other source than the flowers. We know of an Apiary (all Italians) where robbing is almost unknown, for the reason that our friend has always been careful to keep every drop of honey out of their way, and his bees have never got into a way of thieving. The very best preventive in the spring, is to keep all hands busy on the meal, whenever they can fly. We have known its agency alone, to restore quiet when weak colonies were sorely in danger of demoralization. The most productive source of mischief, in our Apiary, is combs containing a small quantity of honey, or those from which honey has been extracted. All goes well until the supply gives out, and then every hive in the vicinity is attacked, and wo to the visitor who confidingly approaches at such a time. In all that Quinby and Clark have had to say about stings, we believe they have omitted to mention the danger of approaching an apiary when a lot of thievish hybrids, have just been deprived of some remnants of comb and honey that they have been quarrelling over. It seems to us that stings come at such a time, all the more aggravating, because they come without warning, and without provocation of of any kind. They just sting out of pure—— well, meanness.

There is a queer phenomena that we cannot quite understand, *sometimes* observed; and that is where a good colony permits themselves to be robbed without the least resistance; see page 44 Vol. 1. Many may be inclined to deride such an idea, with Italians, but they may some time see it to their sorrow. We have always succeeded finally, in getting them to show the desired "spunk" toward intruders, but whether it was the "different perfumes" we gave them, or the rousing them up that helped the matter, we cannot say now. With very weak stocks, of course contracting the entrance is a great help, and whenever they are really overpowered, the hive should be shut up entirely, but we would never do this when there seemed any prospect of their getting the better of the robbers. Nothing but real practice can enable one to determine at once which are robbers and which are not. After the hive is *securely* closed, we cannot see any use of carrying them into the cellar. We simply open it just late enough in the evening to allow the thieves to go home, and then we are sure to be the "first one up" next morning. If they commence again, we close the hive once more, and keep it closed about three days; robbers will usually in that time decide to remain there, and will labor for the very hive they have before been plundering, only that they still retain their thievish propensities, and are sure to be foremost whenever anything of this kind turns up in future. We at one time were in the habit of closing the hive with wire cloth, but after finding the wily Italians who were inside would pass the honey through to their comrades on the outside, we discontinued it. We at first were slow to believe this, but our friend Shaw says he has had it happen often, and in fact now closes his Nucleus hives with a double wire cloth with a half inch space between the two. If you are with your bees during the working season, there is almost no need of having any trouble from robbing.

Now, after the above remarks, some may think our dry sugar feeding, an inconsistency, but it is not. A dozen boys might quarrel over a half dozen apples, but they assuredly would not over a wagon full; and thus it is with the bees. Several reports seem to show that even combs of honey, can be fed in the open air in the Apiary, providing you have an unlimited supply, and spread them out so as to give all a chance; but beware of letting them get out before the flowers furnish a supply. Our next friend has had experience in open air feeding for many years; we will listen to him.

FEEDING IN THE OPEN AIR, ETC.

Commenced wintering with 31 stocks, lost 4 and one died leaving plenty of honey. One was robbed, Queen left in hive, and one lost their Queen, so I supplied it with a Queen from robbed hive. One swarmed out and bees went into another hive. The 27 left are strong in bees and generally light in honey.

Commenced feeding meal about the 1st of March, also diluted honey and brown sugar at same time in old feed troughs made in 1854, and used more or less every spring and fall since. They are made of inch pine boards with thin floats perforated with small holes. The troughs and boxes with syrup and meal are set on south side of building in the sun, protected from fowls, wind, and rain. The troughs are kept sweet with boiling water and salt. As a general thing, out-door feeding gives best results with me. It won't hurt the strong and certainly strengthens the weak, keeping all smart, and active; and as Langstroth says in his book, they will flock to the feed if warm enough. like pigs to a trough.

Honey causes the greatest commotion, while sugar leaving less scent in mouths of hives, gives less chance for robbing. They have carried away up to this time, the fine part of wheat, oat, and rye meal, 2 bushels, and 20 gallons of syrup. I find no trouble in laziness, as natural stores accumulate.

Those 3 swarms spoken of some time ago (see page 22) supplied with old honey wintered well. The one robbed was one of the 3; I believe it was caused by the candied honey rolling out at the front of the hive, and attracting robbers; as I was away it became overpowered by its near neighbor, they appropriating both honey and bees—no great loss.

My son had 8, five old and three young, the latter are "gone up." Trying times yet for weak colonies, but close care, and long and judicious feeding will bring them all safely through.

Ghent, O. March 31, 1874. T. PIERSON.

It seems pretty certain now, that if bad honey causes dysentery *one* winter, the same honey fed another winter does not always produce it.

Is it necessary to give bees water in Feb. and March for brood-rearing; if not what is the reason my bees ceased brood-rearing in March?

Orrville, Ohio. C. J. YODER.

We have never been able to discover that water was necessary while bees were indoors; after they were out, if cold, the condensation affords a supply; if warm they can go out and get it. Was it not on account of lack of pollen?

MR. ROOT, DEAR SIR:—I have a Queen in one of my colonies, introduced last fall, that lays none but drone eggs. Is it likely, or possible, that she will do better, in the future? Mr. Alley assures me that she was fertilized. She is a very fine looking Queen, is quite large.

On looking into the hive to-day, I found a great many drones, (finely marked Italians) several prominent drone cells, and one Queen cell but no bees clustering around it, in the second frame from the outside; I am very doubtful as to the contents of this cell, not knowing where the egg should come from.

Will you please advise me what to do in the matter, the colony is tolerably strong yet, and is carrying in pollen, not much however. This Queen cell appears perfect. Wm. M. CAKE,

West Independance, O. April 13, 1874.

We would treat the colony precisely as a Queenless one, a *young* Queen sometimes produces workers after having at first only laid drone eggs, but a drone layer at this season, rarely if ever produces any thing better. The deserted queen cell is a common occurrence, and only indicates they have discovered something to be wrong. If given worker larvae, they will probably rear a Queen just as if they had none.

My bees have, on account of the very backward and cold spring, no brood yet. Not until last Friday did I finish taking out all my bees. I found so far 32 dead and Queenless ones, out of 850, but fear I will lose more. A good many of them are weak, and 5 of them froze only a week ago. A. Fuerbringer and my brother C. have lost but very few stocks. On an average bees have wintered very well so far in this part of the country.

Jefferson, Wis. April 14. ADAM GRIMM.

As the above loss is less than 4 per cent, we must call it very well, and that reminds us that we have been thinking of making up a list of those who have wintered with a loss not exceeding *one per cent*, and calling it the "Roll of Honor"but as *we* cannot call them wintered, until about June 1st, we will postpone the matter until next month. Of course our next friend will be included for she has had *no* losses.

We hope she may continue, to do as well.

FRIEND NOVICE:—I enclose 75 cts. for GLEANINGS in Bee Culture. Should have done so before, but I have only one hive and I waited to see if it would come out alive. Put them out-doors the 7th of this month; they seem strong, so I send the money. I think GLEANINGS very suitable for small folks, I cannot afford a $2.00 magazine for one hive. I hope to Italianize them, although I think they have a prolific Black Queen. HANNAH W. WILLIAMS,

Springfield, Iowa, April 9, 1874.

DEAR NOVICE:—Do you know anything about the Buckeye as a honey producing tree? I see it spoken of on page 36, Vol. 5, *A. B. J.*

And do you know whether it is true that the leaves of that tree are poisonous? I never knew of cattle being poisoned by them, but intended to cut some of the trees down on account of the popular belief.

Hudson, Ills., April 7, 1874. E. SAGER.

Bees do not work on the Buckeye here, at least we can't find them on it. Don't know about the other.

MR A. I. ROOT, SIR:—I find myself minus two numbers of GLEANINGS which I am obliged to have, can't get along without it; I am afraid without a reminder I shall get back into the "patent" business again, which I have discarded for life, cause why—GLEANINGS. I find my bees with more honey than I left them in October, leaving no space for brood; I have therefore extracted four frames from each colony, which they seem to be disposed to re-fill with honey. I am going to try to raise Queens this spring; send me a chapter in GLEANINGS on the subject, one that will not fail. I received a colony of Italians from Mr. R. M. Argo, of Kentucky, last April, which proved to be all I bargained for.

Sparta, Ga. March 7, 1874. JUDKINS HUNT.

Little Blue eyes may like to know that there is a little boy here, who is very fond of bees. He was just two years old last November, and yet last spring he found out and told me where two swarms were issuing. He lives a mile away now, and the first thing he says when he comes, is, "Let us go see bees," and right into the hive almost he will go, not being at all deterred by the stings, or even crying for them. We are afraid of his being badly stung sometime, but he never shows a disposition to trouble them and we try to keep him away, as much as possible, from them. Blue eyes are at a premium here. We would like to see a pair of which we have so often seen mention, tell little Blue Eyes from her AUNT ANNA,

Woodville, Miss.

Is it not a fact that small children are seldom stung? Years ago, a blue eyed chick who is older now, used to terrify her mamma by running away to the hives, and throwing sawdust into the entrance until a shower of Italians hummed about her ears, while she crowed in great glee, to think that "mamma" durst not come and get her. Was she stung, think you? Of course not, for she unconsciously preserved just the demeanor that secures the safety of an experienced bee-keeper, whilst bystanders at a respectful distance are sure to be attacked.

I had four swarms of bees last spring in box hives, but transferred them to Simplicity hives, which I had made at the cost of 90 cts. each. Had an Extractor made for about $10.00. Extracted 180 lbs. Clover honey, and sold at 23 cts. per pound for 120 lbs., and gave away and used the rest. Increased my swarms to 9. One being weak, I took the bees and empty combs of a neighbor's box hive, and put with it, and fed sugar syrup. Also took the bees and empty combs of another swarm *late* in October, and transferred to Simplicity hive, and fed sugar-syrup. The rest had natural stores, and all are doing well in cellar, to date. The last one fed has six spaces filled with bees, and plenty to eat. What is the use of the quilts? I have not used them. WM. H. ROOT.

Port Byron, N. Y. Feb. 23, 1874.

By the use of Quilts we are enabled to secure the benefit of closed top frames with none of their disadvantages in opening and closing the hive; they can be pressed down on the bees without hurting them, the hive can be opened or closed without noise or jar, and we can turn up one side to take out one or more frames, without uncovering the whole hive, when robbers are troublesome.

A. I. ROOT, Dear Sir:—I herewith enclose view of my Apiary, it was taken two years ago when I had upwards of 100 colonies, now I have but 22. I have just made an examination of them and found them all in good condition; wintered on summer stands. I am not educated up to anything but box honey as yet; in fact I have only the box hive but have had good luck with it and hesitate to quit it; to tell the truth I have $500.00 invested in 200 box hives, with cross bars, well made and painted, and am not satisfied that I could get any more box honey in any other way, so I continue on in the old way, it having paid me very much better than any thing (in proportion to outlay) that I have ever engaged in. I began bee-keeping 16 years ago with 9 colonies, and have now 22, having lost in wintering in that time, perhaps 300 or 400; had at one time 165, that was in the fall of 1871, this being the best figures that I ever reached; in the mean-time however, I have sold box honey to the amount of thousands of dollars. J. F. TEMPLE.

Ridgeway, Mich. Feb 24, 1874.

Weather very cold and windy here; a good many bees blown away and lost every day that they fly. Work well on flour nice days, but they don't come often this spring. A. J. HOOVER.

We have few honey producing trees in our neighborhood: we have plenty of white clover, but for some years the bees do not gather much honey from it, and buckwheat yields almost none at all with us. Rape might help us if there was a market for the seed but unfortunately there are no oil mills near, and without having sale for the seed, I doubt whether it would pay for the honey alone. Alsike clover I understand blooms at the same time as white clover and when the one fails I think the other would too, and I doubt the utility of raising any other plant, that requires the yearly tilling of the soil, for honey exclusively. S. Leuthi, Gnadenhutten, O.

B. H. Stair & Co., Cleveland O., will purchase rape seed. Our experience with honey plants confirms friend L's statement. Has any one had honey from Alsike, at a season when white was not yielding it also? Would it not be advisable to expend the time and money toward building up strong colonies in time for the usual harvest, instead of venturing very much, as yet, on artificial pasturage? Of course, careful experiments, by those who can afford to risk losses, are always to be approved.

I don't like to take the honey all away from the bees, and give them cheap sugar-syrup in place of the honey for which they work so hard all summer.

Shimersville, Pa. L. N. KERN.

Nor would we for the world, if we thought the dear little chaps were not just as well pleased, and *sometimes* a deal healthier, with syrup made of clear, white sugar.

Took my bees out of the pit March 17, all right and to all appearance as strong and heavy as when put in. Bees build wavy combs when from any cause they are building slowly, whether a strong swarm or a weak one; the stronger the swarm, the worse the comb. This is gospel.

We might accept it as "gospel" were it not that so few points can be laid down in Bee Culture as invariable. Whenever we think we are sure of a thing and no mistake, somebody else's bees upset the whole theory by doing directly the opposite way.

I don't take any horse manure in mine yet awhile, dirt is just as good and smells better. My bees always have plenty of brood when I take them out of pit. I can't make Quilts work on my side opening hives, frames ¾ from tops, they don't tuck down worth a cent. My wife says if I make her as much trouble with all the new notions I get from you, she'll quit the *bees*-ness. I use a honey-board 3-8 thick and believe I like it better than Quilts, at least for hot weather. It seems to me your plans all assume straight combs in frames to begin with, I supposed side opening hives were now considered indispensable. I put on Quilts 2 weeks ago, some gnawed through already.

Wyoming, Wis. R. L. JOINER.

Several complain of having Quilts gnawed, but if coarse, strong hard woven cotton be used, we feel sure the bees will not trouble much; at least ours do not.

Guess we'll have to try a "pit" next winter. We are sure no one will use "side openers" very long; they will have to be classed with box honey, and revolving can Extractors.

DEAR NOVICE:—Two months ago I thought I could bring all my bees through, but have lost 3 out of 12, the rest are in good condition; our winter was a very mild one, but the spring is very cold; our Co. Paper says one-half the bees in the Co., are dead. I like the manure idea, but wouldn't it soil our nice white hives and make them look bad? We are having a snow storm to-night—bees gather no pollen yet, —have seen them carry it in Feb.

Chariton, Iowa. April 4th, 1874. A. McMAINS.

If you cover the hives with shingles they are not discolored. We can cover the Simplicity hives with dry straw, and then the manure, and if put on in the proper shape the straw is not even wet through.

Will not bees waste dry sugar if fed for stimulative brood rearing? Langstroth says feed sugar-syrup very thin.

How can I get candied honey from a barrel, without taking the head out? So far I have worked on first principles, namely a shingle worked through the bung-hole— molasses gate useless.

Four swarms wintered on C sugar-syrup on summer stands, all right.

Canandaigua, N. Y. R. H. DIXON.

Put some dry sugar in a tin pan where it will be in the sun, but out of the rain, and see if you can discover that any of it is wasted. *Our* bees don't undertake to carry sugar home in lumps. Your neighbors bees may get some, 'tis true, but shall we call that wasted?

Candied honey—a poser truly, but we think it can be "got out," nevertheless. Make the barrel *hot*, either in the sun or by the stove and we think the molasses gate will work. Borrow your wife's teakettle (when her back is turned) and make diluted honey for feeding, of all that obstinately persists in staying inside.

1st. I believe it is generally admitted, that bees are inclined to raise brood toward entrance of hive rather than otherwise. Would it be likely to increase breeding to have an entrance in each end of hive and occasionally turn the hive half-way around, always keeping back entrance closed?

2nd. Can transferring be done early in April with safety?

3rd. Can combs be emptied clean with Extractor, so that Queens will lay in cells immediately?

4th. If enough combs be given to new swarms to half fill the hives, is it best to put them together, with empty frames on sides, or to place an empty frame between every two combs?

5th. Will coarse brown paper answer well in summer and winter, to retain the heat and allow the moisture to pass off?

6th. Quite a number of Queen breeders offer Queens, in GLEANINGS, the coming season at $1.00 each. I understand these Queens to be fertile Italian Queens but not warranted to have mated with Italian drones. Are any of these persons so situated at a distance from Black bees, that these Queens will be almost certain to have mated with Italian drones?

7th. I can purchase butter-firkins here at 50c. each, which will hold about twelve gallons. Will they answer for holding extracted honey, or will they be likely to impart a bad flavor to the honey, after having contained butter?

8th. Do you know anything about Alfalfa or Lucerne, as a hay or honey plant?

White Plains, N. Y. GEO. O. TOMPKINS.

1st. We have not found that they are more inclined to rear brood near the entrance. In order to save useless travel, they may do so in the long hives; we have tried changing them end for end on the plan you mention, but discovered no especial advantage in so doing.

2nd. The objection to transferring in April would be danger of chilling brood, and interference from robbers, if they were not occupied in gathering stores.

3rd. The Extractor never leaves the combs dry, but the bees will lick out the cells clean enough for eggs in a very short time, say half an hour; an examination will then show the honey that adhered to the cells, carefully collected in a few *filled* cells, near the top, or outside of the comb; we frequently find eggs in a comb within a couple of hours after extracting.

4th. Much is dependent on the size of the swarm, and the weather. We would put the combs all together at first, and put one empty frame between them at night, when the comb was well started, another, and so on, endeavoring to keep each comb strait, by having it built between two full ones.

5th. We do not think it sufficiently porous to keep dampness from accumulating in winter, but it does very well in spring.

6th Messrs Shaw and Daniels; Dean, nearly as good, and every season shows more Italians and fewer common bees.

We cannot speak for those who reside at a distance.

7th. They will certainly do if waxed, and may answer if not; we cannot say.

8th. B. H. Stair & Co. Cleveland, O. write:

We regret to say we are not well posted on Lucerne. There has not been sufficient interest manifested in Lucerne for us to test it; have sold it for many years. In Europe it is also called everlasting clover, on account of its remaining some 10 to 15 years without re-seeding. The price of Lucerne is 50 cts. per pound.

The *Prairie Farmer* contains several articles on its cultivation and we gather from them that it must be kept free from weeds for the first three years by careful culture, and that it yields no crop, or but a small one until the third year.

As the roots penetrate to a great depth, its power to withstand drouth is immense.

(*Continued from front cover.*)

deeper than the L., that would bring anything like uniformity of dimensions. When Adair gave a description of the "New Idea," page 250 *A. B. J.* Vol. 8, he mentions frames 10x13 *inside*, which with common nailed frames would be as near as we could determine, 11¼x13¾, and this seems to meet the views of most bee-keeper's.

If the South has not been fairly represented we fear 'tis because they don't send in their reports.

We cannot tell whether an increase to 40 stocks will be too much or not, for we don't know how much perseverance you have got. With your climate where you can build them up almost any month in the year, we should think there would be but little risk any way.

Enclosed find 75c. for which please send me wire cloth to make a bee hat after the pattern given in Langstroth's book. W. Senior, Evansville, W. Va.

Now friend S. we should be much pleased to sell you the wire cloth, if we thought you needed it for such a purpose, but if you will be advised by us, you will use the wire cloth for something else, and make a vail with the part before the face, made of a kind of silk lace, called Brussels net. If you desire, we will send you one, by mail all complete, as we would have it, for 75 cts. Rest assured we have had our share of experience with wire cloth vails.

If you must have a vail, have one that is easy, and will obstruct the sight as little as possible, for you are just as safe, as if you were riveted in a sheet iron armor with sleeves and —a— coat tails to it.

DEAR NOVICE :—Your 1st. vol. rec'd and devoured; and there is a gnawing in my intellectnal maw for another *feast*. "Heow" in this world do you get so much good meat on so few bones? "Deow tell"?

But that's not what I want. Here's the *half price* of a *whole barrel* of crude Oil, and I want you to exchange it for "GLEANINGS In Bee-culture" for 1874.

"Now get along quick!" J. W. Barlay, Edenton, Pa.

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal for	$2.25
" The National Bee Journal "	2.25
" The Bee Keeper's Magazine "	1.75
" All three, of the above "	4.00

Books for Bee Keepers.

SENT postpaid on receipt of price.

Langstroth on the Hive and Honey Bee	$2.00
Quinby's Mysteries of Bee Keeping	1.50
Bee Keeper's Text Book, muslin,	.75
" " " " paper,	.40

The above are really all, that we can recommend, and they should be read with considerable allowance for being much behind the times.

Langstroth, is valuable as giving the correct Natural History of the bee; Quinby, as giving a rather more practical view of the industry, so far as dollars and cents are concerned.

King's text book, as being a condensed and alphabetically arranged summing up of the two.

Langstroth, seems to have pursued his investigations with an enthusiastic love of getting at truth alone, and Quinby, with a desire of rendering the business less uncertain in a pecuniary point of view, to the masses. While these two great writers started out, each without a knowledge of the other's work; it is greatly to the credit of both that they agree so nearly in all essential points.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

J. Shaw & Son, Chatham center, Medina Co., Ohio.
I. E. Daniels, Lodi, " " "
G. W. Dean, River Styx, " " "
W. J. Hosmer, Janesville, Minnesota.
James A. Buchanan, Wintersville, Jeff. Co., O.
Dr. J. P. H. Brown, Augusta, Georgia.
Miss. Annie Saunders, Woodville, Miss.
W. J. Standefer, Dry Grove, Hinds Co., Miss.
W. D. Wright, Knowersville, Albany Co., N. Y.
J H Nellis, Canajoharie, Montgomery Co, N. Y.
R S Becktell, New Buffalo, Mich.
C R Williams, Milan, Erie Co, O.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

J. H Martin, Hartford, N. Y.
Geo. T. Wheeler, Mexico, N. Y.
R. S. Becktell, New Buffalo, Mich.
Kruschke Bro's, Berlin, Wis.

In order to hasten the introduction of the ☞ STANDARD ☜

Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground	$2.00
Twenty frames for above 5¾ c. each	1.15
Sample Frame, by mail,	10
Quilt	40
Or all complete except painting, for	3.50
The same in a bundle including nails, hinges etc,	3.25
Extractor made expressly for Standard frames, (Comb frame 14¼ wide, by 10 deep.)	$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

ILLUSTRATED JOURNAL A magnificently Illustrated Monthly, with **Chromo** $2.50 a year. Send **10 cts.** for sample copy, or **30 cts.** for sample Chromo, terms to agents, etc. **Canvassers Wanted,** in every town, county & State. Address, THOMAS G. NEWMAN, Room 27, Tribune Building, Chicago.

SCIENTIFIC FARMER A Richly Illustrated Monthly, $1.50 a year, **Chromo** free to annual subscribers. On trial, three months, **25 cts.** or with Chromo, **50 cts.** Sample copies and terms to agents sent on application.

Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

PLEASANT AND PROFITABLE EMPLOYMENT, for male or female, in every city of the Union. Active persons can double their small investment every day. Inclose STAMP for particulars to

THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,		$6.50
Two " " "	"	8.50
Corks,	"	.75
Tin Foil Caps,	"	1.20
One and Two Pound Labels, per gross,		.75
The same with address printed to order, per 1000,		5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,		19.00
Labels for above,	" "	.65
The same with printed address, per 1000		4.25

CHOICE NEW ALSIKE CLOVER SEED.

One bushel (60 lbs.) at		$20.00
½ "	"	10.00
¼ "	"	5.00
One pound,	"	.50

Has arrived and is for sale. Also

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

For further particulars, Address,

CHAS. F. MUTH,
1tf Cincinnati, O.

PURE ITALIAN BEES FOR SALE.

BY M. & M. D. MILLER.

THE 20th of June, 1874, and after, we will sell a number of colonies thus: purchaser to furnish hives and select the bees themselves. We will transfer two sheets of worker brood, and one of drone, as may be agreed, with Queen and bees sufficient for a good colony, remove the old hive and place the transferred colony on the old stand, for two or three days, to secure a good supply of flying bees, and fasten the combs.

Per transferred colony, June 20th,............$10.00

A deduction of 25 cts. per day thereafter until July 10th, and after,............5.00

Hybrid Queens and colony, less, if we have them.

For further particulars, address M. MILLER,
Peninsula, Summit Co. Ohio.

AMERICAN
BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

DISSOLUTION AND REMOVAL.

The firm of BALDWIN BROS. is dissolved by mutual consent, the same to date from Nov. 1st, 1873.

L. W. BALDWIN,
A. A. BALDWIN,
P. BALDWIN.

The subscriber, having removed to Missouri, will continue to breed choice Italian Bees and Queens from the best stock that can be procured. Purity and safe arrival guaranteed. No circulars.

Prices:—Single Tested Queens, $3; Two for $5. Six or more, $2 each. Address L. W. BALDWIN,
Wellsville, Montgomery Co., Mo.

DO **TRY IT 3 Months for 10 Cents;** or with $3 Chromo for 50 cents; or 6 months with "The Flowers of Paradise," a first-class $6 Chromo, 15½x21 inches, for $1. The National Agriculturist and Bee Journal is a 16-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75**. Send now for samples, and **Liberal Terms to Agents free.** H. A. KING & Co., 14 Murray St., N. Y. 1w2

TESTED ITALIAN QUEENS—Sent by mail $3.00 each.

Nucleus Hives, untested Queen, bees and all sent by express for $3.00. Queens bred from pure mothers warranted fertile, with no other guarantee, sent by mail $1.00.

Orders will be filled strictly in rotation.

Address J. SHAW & SON, Chatham Center,
3tf or I. E. DANIELS, Lodi, Medina Co., O.

EGGS FOR HATCHING—White Leghorns from J. B. Smith's stock, exclusively. Lt. and Dk. Brahmas from Todd Herstine and T. William's prize taking strains. Also, Italian Queens at $1.00 each.

Address
3t5 J. A. BUCHANAN, Wintersville, Jeff. Co., O.

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to NATIONAL BEE JOURNAL, now published and edited by

ELLEN S. TUPPER, Des Moines, Iowa.

Liberal terms to Agents. Specimen number free.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address

DR. J. P. H. BROWN, Augusta, Ga.

ASHLAND POULTRY YARDS.

FRESH eggs for hatching:—From eight different varieties of pure-bred poultry. Send for price list. E. J. WORST, Ashland, Ohio. 4t5

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular. Wm. W. CARY,
1tf Colerain, Franklin Co., Mass.

WE can furnish Summer Rape seed, American grown, per pound..........20

The same, Imported..........25

Above includes postage. If sent by Express 8c. less.

A. I. ROOT & CO. Medina, Ohio.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume I, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,
BY A. I. ROOT & CO.
Vol. II June, 1874. No. 6

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee-Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to make a Queen cage.................Cover
How to Conduct an Apiary.........................61
When to Extract.......................................61
Comb Baskets...61
Standard Hive and Frame.........................62
Shall we allow Poultry in the Apiary?..........63
Problem No. 22...63
Answer to Problem 21................................63
Our own Apiary.............................64, 65
How to "Spring" 100 colonies without loss....65
Combs and Honey from dead stocks............66
One dollar Extractor.................................66
Queen Rearing..67
All About Smokers....................................68
Artificial Swarming...................................68

Page.
Wormwood for smoking bees.....................68
Heads of Grain..69
Bees in Texas..69
Straw mats, How to make them..................69
Corn Starch...69
Triangular Frames.....................................70
"Novice" Queens.......................................70
Remedy for bees killing their Queens..........70
Entrance Blocks..71
A timely word in regard to pollen...............72
Open Air Feeding.......................................70
All about Tea-Kettle Feeders......................72
Roll of Honor..Cover
Who will rear Queens in the South? 71 and "
Eggs for hatching......................................71

SUNDRY MATTERS.

DEAR NOVICE:—I have had an elegant 170 lb. balance wheel, iron shafts and metal bearings, steel arbor and treadle pivots, manufactured by the Foundry & Machine Co., of Fort Atkinson, Wis. at a cost of $34.45. The buzz saw runs like a top, and what is more, when the lumber comes from the "machine," it is accurately cut, and ready to be nailed together without further modification. Thanks for telling us "what you know about" saws. D. P. LANE.

We are really glad that one diagram has been of service, and feel encouraged to try again. If the amount named was the total cost, 'tis much less than we dared to expect.

We promised last month to tell how to make a Queen cage—here it is.

Fig. 1, is a section such as would be presented by cutting it centrally, through the middle; fig. 2, the same crosswise. The dotted lines are to represent wire cloth.

Fig. 1

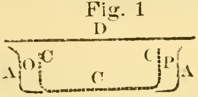
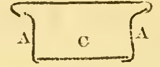
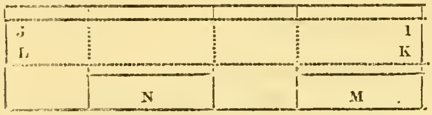


Fig. 2.



Let A, A, A, A, represent the four sides of a shallow tin box without top or bottom, or rather only part of a bottom; D, D, a cover that slides on as will be readily seen by a glance at fig. 2. C, C, C, is the wire cloth cage made by bending a strip, 1 15-16 wide by 4 inches long across each end so as to form ends ¾ inches high. The top edge is first doubled over ⅛ to form a selvage in place of the sharp wire points. The cover is simply a piece of tin 2¾ by 3⅜, with an edge folded on the longest sides as seen at D, D, so that it may slide on our box. This box is very simple for it is all made of one piece of tin 10 inches long by 1 5-16 broad.

In the next figure the lines indicate where it is be cut and the dotted lines where it is to be folded.



In the first place, with a pair of shears make three cuts in each side, down to the dotted lines, the spaces between the cuts being 2, and 3 inches respectively. After making a square fold along the line K, L, turn back M, N, and clip them off nearly up to the fold; now fold all up square, and fold the narrow edge above I J, in the opposite direction; this turn is not up square but at the angle seen around the upper edge of the box. When you have got thus far you will readily see that a box is formed by bending it so as to make a corner at each of the shear cuts, lapping the bottom folds at the corners. Eight drops of solder from the soldering iron, holds it all together and also holds the wire cloth cage in place.

The apartments O, P, are to hold comb honey or pieces of sponge soaked in honey, for food for the occupants. With food at both sides of them they could not well starve, and the two, would hold enough for a long trip. The folds in the tin make the cages very strong. We are, as usual, considerably indebted to *Mr. Washburn* for what ingenuity is displayed in designing it. We would say to our lady readers that one of their own sex, without assistance, makes the cages complete.

Roll of Honor.

Or Department for those whose losses in wintering, did not exceed one per cent.

Novice——Mr. Editor can't we stand at the head *next* season, if we don't lose any?

Although we should probably be quite safe in promising, we will consider the matter; meanwhile we'll listen to friends Oatman & Co, who seem to merit the place just now.

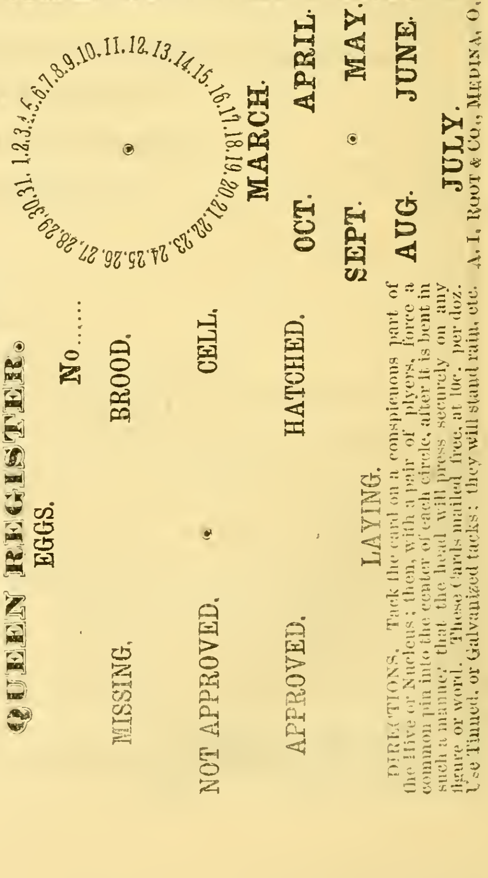
NOVICE:—Accept sympathy in your ill experience of last winter and spring, with your "yellow boys." One year ago this spring, we were served just as you have been—lost 38 out of 58—leaving us but 20 poor weak stocks to commence with, about the middle of May. I could hold some of our swarms in my double hand.

Notwithstanding all the above discouragements, we built the *twenty* poor stocks into *sixty eight strong* colonies, and took to *exceed* 2000 lbs. honey, the most part being ext'd during last summer and fall. So don't be *blue* but *pitch* in; and you will likely astonish even *Novice* the coming season. Will say here, that one year ago last winter, our bees were *wintered mostly* on their own stores, while this past winter they were fed *sugar syrup wholly*. Will give you our mode of wintering some time in future. *Have not lost a colony* this winter nor spring, and the lively fellows have carried off 6 bushels of rye flour for us, and to see them snake in the flour would make *any reasonable* man laugh. J. OATMAN & Co.

Dundee, Ill. May 8th, 1874.

We don't know how it is with our readers but *we* felt the need of just such a letter as the above. Even to-day, May 26th, one of the five Queens caged to prevent swarming out, is dead. She was put in a cage containing no food, supposing the bees would feed her; the other four cages contained food, and the Queens are all right. If the recital of our blunders will be a warning to any body, we'll keep on.

[*Continued next month.*]



QUEEN REGISTER.

No.....

EGGS. BROOD. CELL. HATCHED. LAYING.

MISSING. NOT APPROVED. APPROVED.

1.2.3.4.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30.31.

MARCH. APRIL. MAY. JUNE. JULY. AUG. SEPT. OCT.

DIRECTIONS. Tack the card on a conspicuous part of the Hive or Nucleus; then, with a pair of plyers, force a common pin into the center of each circle, after it is bent in such a manner that the head will press securely on any figure or word. These Cards mailed free, at 10c. per doz. Use Tinned, or Galvanized tacks; they will stand rain, etc.

A. I. ROOT & CO., MEDINA, O.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY.

Vol. II. JUNE 1, 1874. No. VI

HOW TO CONDUCT AN APIARY.

No. 6.

MANY of the remarks made last month will apply to this, more especially as the present season is nearly one month later than usual in all pertaining to Bees. During this month especially, should we see that the Queen has at all times a frame of empty worker comb in which to deposit eggs as we have before mentioned, for it should be borne in mind that the eggs laid now will produce the workers that are to labor during the basswood harvest. Be careful not to go too fast, and also be sure you do not let her get ahead so much that the bees imagine they will have to resort to natural swarming, for we think this never happens unless at a loss to the Apiarist, that can easily be avoided. Nothing but almost daily inspection of the interior of the hives, can enable you to know just what needs doing, that you may do just the proper thing at the proper time.

If you have a convenient hive—the Standard we have described for instance—but a very few minutes are necessary to take a peep at the interior of the brood nest, and when the bees get accustomed to your daily visits, we think you will decide that smoke is seldom really needed in June.

Colonies that are frequently handled, are certainly more gentle, and so far as our experience extends, have invariably given the most honey, but they should of course be handled gently.

The hives in front of our Bee House door are invariably peaceable, whether they contain hybrids, blacks or Italians; and those in a remote part of the Apiary are often quite different in disposition. While the former are usually passed and repassed a dozen times a day, and frequently by those who are in a hurry, the latter are only visited when something is to be done with them.

Barrels for honey should be kept in readiness, and when waxed and painted as per directions given a year ago, they can be kept over without injury if not needed. We find it very convenient to have a few extra, to supply neighbors when a heavy yield comes on suddenly.

With the modern style of Extractors, and the double width, instead of two story hive, scarcely any instruction will be needed for taking out the honey further than that already gone over. Friend Wilson of Lexington, Texas, writes:

> When bees are bringing in honey rapidly, they appear to have little or no time to cap over. Many tell us *not* to *wait* until it is capped, but to throw out the honey as soon as they *commence* capping; this to me is rather indefinite and unsatisfactory instruction. I should be pleased to learn *how much* of a sheet of comb should be capped over before the sheet is emptied? If done too soon, the honey is so thin and light that it will not keep well. If delayed too long, considerable loss will result for want of room to store; your bees will grow impatient and go to swarming. Shed a few luminous rays on the subject in June No. of GLEANINGS, and thus oblige, ONE BEE BOY.

It seems to us he has almost answered it himself. Before the cells of honey are capped, the openings are narrowed down to a small orifice, the size of a pin's head perhaps; now when half of a sheet of comb is thus partially capped, and may be a dozen cells or so, near the top bar are capped over, would be just about the time to extract, we should say. 'Tis impossible to find the contents of the hive all in this condition, for some of the combs will perhaps be pretty well capped over, while others are hardly ready; this makes but little difference however, as the average will be sufficiently thick, and it will thicken still more by being kept, even if bunged or corked up.

Kruschke Bros. send us a description of a very light case for carrying combs made principally of ⅜ basswood. A round handle is fastened by a strip of iron at each end, in such a way that it will turn over and lay on the edge of the box. They offer to furnish a pair to hold 5 combs each, with close fitting cover, for 75c. When the combs are quite heavy, and are to be carried some distance, they advise a "neck yoke," such as farmers use in sugar camps etc.

With the Hexagonal Apiary, 56 hives can have ample room, and the farthest be no more remote than 24 feet from the Bee House door. For such a distance we sometimes think a case is hardly needed at all; besides the Italians cling so tightly that we can many times walk to the house with a comb, while we are brushing them off. We need hardly add that 'tis poor policy to waste young bees at any season, and they are pretty sure to be, if the combs are put into the Extractor before they are all brushed off. The distance of your hives from the Extractor, and the amount of time you have to spare, has much to do with the question of using comb baskets.

Do not give the cappings or anything else to the bees to lick off during a yield of honey. It will hinder them from going out to work, and they will not get as much stored, as if they gathered it from the field; consequently the honey on our cappings is *worse* than wasted. With the wax Extractor it can all be saved, and with very little trouble. For more particulars about extracting, see June No. of 1873.

STANDARD HIVE AND FRAME.

IN *N. B. J.* for April, page 94, we read as follows:

"We no more expect ever to see a "standard frame," or a standard hive, than we do to see a "standard" religion or "standard" opinions on anything.

People cannot see alike, and the best way is to exchange opinions freely, and then "agree to disagree.""

Again on page 121, *B. K. M.* we read:

"A STANDARD FRAME.—Everybody—beg pardon—every *bee-keeper*, would like to have all other sizes and shapes of frames and hives, thrown away, *except one*. Whose is it? Why, *mine*, of course. No other is just right. It is like the efforts to unite all denominations of Christians. They are all ready, willing, *anxious*, but it must be done on "my creed.""

We are really sorry to find we have been so little understood, and that too, by two Journals, who certainly have it in their power to do much toward lessening the growing evil of having so many different dimensions of hives and frames, and still more coming. We cannot see how Mr. King could get the impression that we advocated our own favorite hive, for the one we have proposed as a Standard, because it seems *nearest the preference of the people*, is one we have never used at all.

Mr. K. and Mrs. Tupper would do a great amount of good, by advising their subscribers to adopt the 12x12 frame if they are agreed in preferring that, and also by advising them to be *very exact* in the outside dimensions, that whenever American hives are found, from whatever source, any frame may fit any hive. New beginners could certainly adopt this, just as well as to have them vary ½ or ¼ of an inch, or just enough to make an exchange impossible. What bee-keeper has not seen trouble of this kind. Because the evil is so great, shall we despair and make no attempt at all to lessen it, or to prevent its increase with the next generation of Bee-keepers?

B. K. M. and *N. B. J.*, we beg of you both to consider well, what you are doing before you advise Bee-keepers to make no attempt at uniformity in hives and frames. We should be perfectly willing to adopt the American frame as a Standard if 'twas the wish of the majority, and in choosing the Adair frame which comes nearly half way between it and the Langstroth frame, we hoped to have one that would be adopted when circumstances favored a change, by the advocates of both, or either of them.

We hope no one will be so thoughtless, as to allow personal or outside matters to influence their judgment in such a matter. If we cannot have one frame, cannot we limit the number to four or five, or half a dozen at least? In the manufacture of Extractors, great expense and labor can be saved by coming down to a *few* regular sizes.

What would be thought of our coach and wagon-makers if they persisted in making vehicles that "tracked" all the way from two to ten feet in width, with no two alike? Now if Bee Culture is to become a permanent industry, are not the evils of hives and frames all unlike, a parallel case?

Weather wet and cold, bees breeding up very slow—notwithstanding the piles of manure around them, for that has cooled off— the rain we have had for the last two weeks would cool off almost anything.

Have made several "standard hives" after the plan in April No.. I like the looks of them. You speak of painting bottoms before using. I suppose you mean inside hive, and they need it outside full worse don't they?

How would boiling coal-tar, with dry sand sprinkled on, do for them next the ground; preserve the bottoms and keep the dampness out wouldn't it?

Manalapan. N. J. C. H. RUE.

We should think the coal-tar and sand, a fine thing for the under side, but would it not be somewhat inconvenient, unless a lot of hives were treated at once? We always have paint handy and can put it on at once. The coal-tar would doubtless be cheaper.

DEAR NOVICE:—I took my 5 hives out of cellar April 10th. One was Queenless, one swarmed out the same day and went to another hive. Speaking of Standard hive, I have come very near it. I have made a lot of hives 31x16, holding 20 frames; the frames are 11½x13½ out-side measure, with ¾ inch square bar for top, and lay my quilts on top. I also made a lot of hives square 16x17 holding ten frames, and box on top under which I put 4 honey boxes, took off quilts and put boxes on top of frames. Hive made same as yours by rabbeting and nailing both ways on the corners.

Wolcottville, Ind. April 4th, 1874. A. PLOUGH.

We have also had several orders for hives to hold only ten of the Standard frames, but we would not advise these to be used either for a two story hive, or for box honey on account of depth. If we were to use a two story hive, 'twould assuredly be the Langstroth frame, and for box honey, either the L. or Q. frame.

As we have given several letters, defending a larger frame than the Standard, we will give one in favor of a still smaller frame. See friend D's letter of last month.

I prefer a shallow frame, because the bees regain the cluster better on cold days, in fact I like to have the cluster near the entrance; the reason I like a short frame is, it gives me the power to condense the bees into a small compass for wintering, and at any time when reduced.

For all that I can see, my Queens pass to the next comb in laying, readily, and I can interpose a comb that is empty when I please, and will not have a cold end in my hive at all, especially in winter and spring. The bee bread will be on about four combs mostly, to be had at pleasure, this helps us with weak hives. I generally take up about 100 hives in the fall—keep about 50 over. This gives me a warrant of success, and I increase more in new swarms. I have to handle more frames, but what of that, I am willing to work harder and make a sure thing of bee-keeping. I can say a great deal more that is truly important to the hive if needed. Delhi, Mich. J. L. DAVIS.

Now as an evidence of the soundness of Mr. Davis' teachings, we append the following, that came some time ago from his neighborhood. We don't know what frame friend L. uses, but hope he will inform us.

MR. EDITOR:—I rec'd from one swarm, 4 others, and 434 lbs. of honey. The old stock had at the end of the season at least 40 lbs. of honey and 30 each for the young swarms, two of the young swarms made a part of the 434 lbs. From 5 strong and 3 weak colonies, I got about 1600 lbs. of honey which here, was as good as $240.00, and had in the fall 16 very heavy swarms. I have never seen so good a season for bees as this, in this place. I have never taken a Journal until Mr. Davis sent GLEANINGS to me. Mr. Davis has taken much pains to show me how to manage my bees, when I have visited him; he lives ten miles from here.

From one of my hives I got 25 lbs. in 3 days, from another 37¾ in 7 days.

West Windsor, Mich. J. L. LEWIS.

Are we not right in thinking, *all things taken into consideration*, that the evidence in favor of a larger frame than the Standard is just about equal to that in favor of a smaller, and no more; and may not the same be said of both length and depth.

PROBLEM NO. 22.

ANSWERS ONLY ADMISSIBLE FROM OUR LADY READERS.

SHALL Poultry be allowed to roam at will in the Apiary?

"But Mr. N., is the above properly a *problem?* and in fact are not your problems many of them, christened with rather a queer idea of the definition of the word.?"

"No, no, don't get the dictionary. Well call *this one* a conundrum."

"But it isn't a *conundrum* either."

"Well what *would* you call it then?

"Perhaps a question for a debating society; or rather a question for debate, for a Bee-keeper's convention, to be decided by the feminine part of the assembly, as you have stated it?'

"Very well. Of course the 'Chair' should present the subject?"

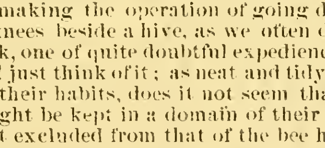
"Undoubtedly; but the Chair should be sure to do it impartially, and if we mistake not it is already prejudiced pretty strongly on one side of the question."

"Well! how will this do: We will publish the reports on both sides of the question, from both sexes; afterward we will decide the matter by a vote from the ladies. Meanwhile every one is at liberty to constitute his Apiary of one Bee Hive and 50 chickens, or 50 Bee Hives and one chicken, but it can't be considered an Apiary unless it contains at least *one Bee Hive*."

P. S.—"But is it best to say nothing about the annoyance fowls have many times made us by getting in and scratching the saw-dust all around, digging holes under the hives, knocking the entrance blocks away, and last but not least, making the operation of going down on ones knees beside a hive, as we often do when at work, one of quite doubtful expediency? and honey! just think of it; as neat and tidy as bees are in their habits, does it not seem that poultry might be kept in a domain of their own, or at least excluded from that of the bee hives?"

"We would say nothing about it. When poultry have the run of a large farm instead of being cramped up in town as we are, it might make a great difference. Besides let us hear what has been the experience of others."

ANSWER TO PROBLEM 21.



Answer to problem 21 will be found in the above sketch, I have used two like this, holding four frames each, rack is made of 1 inch pine. R. H. DIXON,
Canandaigua, N. Y.

Thanks friend D. Your frame has an advantage over our own, inasmuch as it can be carried easily with one hand; but how about robbers? Unless you have something to cover up the combs, the above would be an excellent mark for thievish hybrids. In 1870 'tis true we forgot there *were* robbers almost, but every season since has obliged us to use "eternal vigilance."

OUR OWN APIARY.

FOR two days past we have had weather, that allowed the bees to fly a little in the middle of the day, but nothing that can really be called warm weather.

The manure has all been removed for a week or more, and to-day we have raked up the rubbish and banked sawdust around the hives, as we usually do in March. Two colonies were found Queenless and were united; as both together had nearly enough bees to raise a Queen, we gave them some eggs, for it is now late enough in the season to commence Queen-rearing, ordinarily.

Of the remaining 20 colonies, perhaps half have brood on two or three combs, but not *one* has brood in four combs; the other half, can only fetch up with warm, favorable weather. We really do not know of anything that can be done *unless* we have warm weather. A colony that had been fair a month ago, was found after a frosty morning, with not enough bees to cover half of their scaled brood, the bees having been lost we suppose, in attempting to work on the soft maples, which are just now in bloom, during the cold windy weather.

After supper—Another Queen is missing, and we have now this second day of May, only *nineteen* Queens and not bees enough with them altogether, to fill three, one story Simplicity hives. Were it not that we are receiving reports daily of similar losses—misery loves company—we might think we alone were unfortunate.

At any rate, none of our readers can now accuse us of not having had experience with the dark side of Bee Culture.

The following from friend Doolittle seems to indicate that even hives full of bees, do not rear brood unless they can have out-door exercise. We first give an extract from a letter dated March 4th, as follows:

My 54 colonies and 4 nuclei, are in splendid condition at present date. Some of my full colonies have 200 square inches of brood. I have never lost but two swarms of bees in winter, and those through starving by carelessness, but when we come to have 24 days of weather that bees cannot fly, in the last of April and first of May, (like spring of 1873) I must confess I am not quite equal to the case.

Borodino, N. Y. April 30th, 1874.

FRIEND NOVICE:—My natural disposition is to be cheerful, but I must confess I am feeling rather despondent about these times. We have had but three days this month on which bees could fly. It snowed on the 25th. to the depth of 12 inches, and has been snug winter weather ever since. Bees must generally become extinct if the springs in future prove as unfavorable as the past two; in fact scarcely any remain, except with two or three practical Apiarians in this County. I have 56 swarms alive as yet, but a part of them cannot stand it long, as the old bees are dying all the while and no young ones have been reared, of any account, this spring. I have examined but eight hives, as the only comfortable day was on Sunday, but feel now that I should attend to their wants even on a Sabbath. I have hives that occupy 10 ranges of comb with bees, with brood on only two combs, and small space at that. I have done all I could for them and if I lose them it cannot be helped. Has the last week been cold with you and have you realized your expectations with your manure? G. M. DOOLITTLE.

May 8th—To-day is our first really warm day, and our 19 Queens bid fair to make a "live" of it after all.

We have "tidied" up our Apiary, got the hives around facing the east again, swept the ground up clean, and things are back in the old shape once more.

Whether our "manure experiment" was detrimental or otherwise, we are at least, at present not inclined to recommend it to others. We have to-day located one of the long Standard hives in front of one of the grape vine trellises, and find the position fronting the East, with the lid to open back against the trellis, much the most convenient position. Bees among the farmers about here have wintered unusually well, and of course they laugh at our "scientific" Bee Culture. One says, it is the Extractor that killed our bees, another, that sugar-syrup isn't natural like honey, a third that the Italians are to blame etc.

If we were perfectly satisfied just where the whole trouble was, *we* might try to tell. As it is, "guess we won't," at present.

May 9th—Last evening, we discovered our poorest colony so much reduced that no attempt seemed to be made to use the eggs which the Queen was patiently depositing, and the brood having been killed by the recent freezes, we concluded to unite them with our one Queenless—not colony but "little cluster." As our attempts last season at uniting such weak colonies by caging the Queen, had resulted in their death almost invariably, we decided this time to risk a speedier method, and therefore simply lifted the bees combs and all, from their own hive into the other. Although both colonies had been during the day, active in repelling robbers, they seemed to take a very favorable view of our kind intention, and crossed antennae with the new occupants in a manner so amicable that we closed the hive thinking our former skill with bees was at length, after having played us truant so long, returning. An examination half an hour later, and another this morning, showed the Queen all right.

May 10th—Our nice Queen being found dead in front of the hive, we shall have to conclude our former skill has not returned after all. We wonder how many of our readers know just the sensation experienced in finding a fine Queen has been killed by her bees; we first feel sorrow, then regret and chagrin, especially if 'tis through any of our own carelessness. The concluding sentiment with us is a strong tendency to "git mad" only restrained by the thought that as nothing can be done to reanimate that little form, all we can do is to resolve to be very careful in future, and then endeavor to stifle the pang by trying to forget all about it in busying ourselves with the rest that *are* alive—perhaps, meanwhile whistling a refrain on a similar key to the mourning note of the now Queenless colony, as it comes to us faintly as we pass near them.

The weather is now beautifully warm and pleasant; this morning we found one blossom on the early cherry tree for "Blue Eyes" who opened them still wider, and almost exhausted her infantile vocabulary in her delight at it. Before sun down the tree was almost in full bloom and the bees that had been robbing in the forenoon, in the afternoon were gathering honey at a very fair rate and "Blue Eyes" was still more delighted to be able to see where the bees really got the brilliant colored pollen that she and "papa" had watched and admired so much; their "bread and butter" for little bees as it had been explained to her.

May 11th—A thorough examination to-day showed that a few colonies were making astonishing progress; more, were just getting under way, and two, were dwindled down until there were too few bees to even hatch an egg. After holding an Editorial consultation we decided to make no more attempts at introducing these Queens to Queenless colonies, but proceeded to cut pieces of hatching brood from the good colonies, small enough so that the bees could care for them, and these were inserted right next the small cluster, being careful not to demoralize the remaining frail organization which kept the dozen or two bees near their Queen.

Dinner time—In one case the bees have commenced feeding the brood, but in the other no attention is paid to it.

Evening—Both are now caring for the brood, and an accession of downy infant bees just hatched, seems to infuse courage once more into their disheartened hives.

We have now just *seventeen* laying Queens. Our Quinby hive lost their Queen and reared a young one in April; she is not yet laying, and we fear may be too old. Drones have made their appearance in one hive but we consider it more because their Queen is an old one, than as an evidence of prosperity, for their brood does not compass more than four combs.

May 12th ; 5 o'clock in the morning—The cherry trees are literally odoriferous humming snow drifts of bloom, and we find ourselves left all alone to enjoy the prospect, for no one else is stirring visibly.

We find on the ground in the Apiary a greater number of bees crawling about or just moving, than we think can possibly be consistent, with a natural state of things.

They are not old bees for their wings are perfect and many of them are evidently from their downy appearance, young Italians. We find them on the walks and fences, and if warm weather is not a remedy for this state of affairs, we have truly something serious to contend with.

The same thing was noticed last fall, and others have spoken of it, but again, Apiaries but a few miles off seem to know nothing of it, and their bees have passed through the present spring months full as well as usual.

May 15th—We really can't think of anything else to express our feelings, except swinging our hat again, just because one young Queen has commenced laying; and now we have *eighteen* again, instead of seventeen. If our fortunes have really passed the lowest ebb and commenced ascending, we shall draw a long breath of relief. The weather now is all that can be desired, and we are interposing combs as fast as our half dozen strongest will bear it; and 'tis pleasant to note their daily growth and prosperity. Our best colony is really getting its hive full of honey from the fruit blossoms, but we shall remove combs and give them empty ones as fast as they will bear it, using the removed ones for peopling our empty hives.

May 22nd—We have had a week of cold, wet weather, and our two weak "clusters," are Queenless. One of the Queens died three times, and the last time she "stayed" dead in spite of persistent efforts to coax her back to this world of care.

Truly:

"This world's a wilderness of woe."

Why it's really aggravating to hear from others who haven't lost any. We *know how* to take care of bees, every body knows, especially when they are all strong stocks, and it's warm weather with no cold storms. We have kept saying to ourselves all along when the weather was bad, that friend Bolin would be *sure* to lose some of his 99 colonies now, at any rate, but imagine our disappointment at learning he has not. We believe we shall have to let him stand "clear up to the head," in the "Roll of Honor," while we shall have to be put down to the extreme foot, or perhaps placed a yard or two below all the rest.

The advice given in the following, for *spring* treatment, we heartily commend.

HOW TO "SPRING" 100 COLONIES WITHOUT LOSING ANY.

FRIEND NOVICE:—I'll tell all I know about the pollen, provided you don't talk of putting me in the Editorial chair again. The mere thought of occupying such an exalted position makes me feel nervous; more so than it would to have a lot of cross hybrids "go for" me, although they can sting *a little*, if they try.

Some stocks had considerable pollen when put into winter quarters, others very little, and in several of them the supply was nearly or quite exhausted, when they were put on the summer stand; yet the rye flour they carried in, seems to have supplied all deficiencies in that respect. As many of the best stocks I now have, are some of those having the least pollen, when taken out of winter quarters, I think they should have some pollen when put into winter quarters, as I do not think they can raise brood without *any;* still of the two extremes, I should prefer their not having quite enough, to a large surplus, as it is easier furnishing what they need in the spring, after they are put on the summer stand, in the shape of rye flour, than it is to get the old dry pollen out of the brood comb, where there is too much. Rye flour is undoubtedly one of the best stimulants we can give our bees in the spring, as it gives a greater impetus to breeding, early in the season, than anything else I have tried, and at the same time it keeps them out of mischief, by keeping them busy. It also saves the lives of hundreds of industrious workers, by giving them employment at home, instead of ranging the fields and woods, in quest of natural pollen,

My bees carried in the flour from about four bushels of rye, this spring. They worked on it, to some extent, the first week in March, then not again, owing to the cold, until the third week; and after that whenever the weather was warm enough, until about April 25th, when they left it altogether for natural pollen. The first natural pollen was brought in the first week in April, being a month later than usual.

My losses this spring have only been the swarm that starved, (I am almost inclined to say for want of sense as they had plenty of honey in the hive, the second week in March,) and one Queen in April, the rest are doing well. The Queen that died was not quite two years old, yet she was one of those "natural, long lived, prolific Queens," of which we read so much a few years ago; whilst a forced artificial Queen that was hatched May 6th, 1870, is as full of life as ever, notwithstanding part of her lungs are gone—one wing clipped. She led out a swarm May 1st, 1872, and one May 20th, 1873, being the first natural swarms I had each season. The summer of 1871, I took from the old stock, and the two swarms that came from it, 216 pounds of box honey; in '72, 120 lbs. from her colony; and in '73, 150 lbs. from old stock and swarm. If clipping a Queen's wings gives such results I think I shall be guilty of more of it, even if it is "impertinent interference."

For several years I have practiced stimulating my bees, in the spring, by giving them a spoonful or two of syrup every evening. It is considerable trouble, it is true, but it pays, and that is what most of us work for. I have not found, in my experience, that having plenty of sealed honey, or even feeding a large amount of syrup at one time, answers the same purpose, so far as breeding is concerned, as regular, daily feeding.

The worst, and in fact about the only trouble I have with my bees during the winter and spring, is to keep them from leaving their hives in quest of honey or pollen, when the weather is too cold, after they are placed on the summer stand in the spring. The remedy is shading the entrance; and in a few instances, during the bright but cold weather of the last two months, when they would perish in coming out, when I *knew* it was too cold, and the ground was covered with snow, I shut them in. Covering the hive with manure at such times, only makes a bad matter worse, by increasing the heat and making them still more anxious to be out.

I have not lost a swarm for several years, by the bees swarming out and joining other stocks. Where such losses occur, they are generally owing to either queenlessness, want of sufficient bees to care for brood, want of honey, or mouldy combs. The first two causes may be remedied in the fall, by giving to all stocks that need them, young prolific Queens; the third at the same time, by feeding until they have sufficient stores, and the last by giving upward ventilation, during the winter.

I am sorry to hear of your loss, but I have one consolation; Novice knows how to build them up again, on the double quick, *and will do it.* Tell "blue eyes" that we have a little three year old blue eyes here, who would part with anything else on the place sooner than she would with a swarm of bees. No amount of reasoning will make her believe the bees will sting her, intentionally, and she acts accordingly, and they seem to respect her faith in their good behavior.

JAMES BOLIN.

West Lodi, O. May 20th, 1874.

P. S.—Losses have been heavy in this section, during the winter and spring, where bees were left to take care of themselves, amounting, in some cases, to from ½, to the entire stock.

Gleanings in Bee Culture,
Published Monthly,
A. I. ROOT & CO.,
EDITORS AND PROPRIETORS
MEDINA, OHIO.
Terms: 75c. Per Annum.
For Club Rates see Last Page.
MEDINA, JUNE 1, 1874.

"BLASTED HOPES" is so large we couldn't put it in at all. "Reports Encouraging," tolerable, but "Humbugs and Swindles" have dwindled down to nothing worthy of publication, which is the best news of all.

FRUIT blossoms are furnishing an unprecedented amount of honey, is the report from almost every side. Oh that we had bees to gather it. "Easy" says "buy 'em," but Prudence says, "No Sir 'ee. Learn how to keep 'em first."

WE feel daily more strongly convinced that the two story hive is about to be laid aside, and the double width ones used instead. We shall in future keep only the latter made up on hand, and only make the former to order.

MR. MUTH this month advertises an extra fine quality of flint glass Honey Jars. Just the thing where you wish something extra nice; say, for a present for instance. Who would not be pleased with a nice flint glass jar of honey?

AGAIN, we are obliged to omit many things we disliked to, and have even been obliged to put diagram of Queen cage on the cover. We fear our friends will think as we do sometimes, that we have inserted unimportant matters and omitted those of value. "Like enough," for after all "we're all poor cre'tur's."

MR. ALLEY was one of the first, if not *the* first who attempted to raise good Queens at a low price. Some of our Medina Bee-keepers' think the best Queens they have had, have been from among those rec'd of Mr. A. See his advertisement in this number.

THOSE who have already subscribed for GLEANINGS, can have *Mrs. Tupper's Journal* or the *A. B. J.* by sending us $1.50; *B. K. M.* $1.00. This gives our readers an opportunity of taking all the Journals if they wish, at a low rate. We will try and make equally advantageous terms for the *Bee World* when they get it out on time, and with a little more care. All the rest come to us now, full up to time.

WE too have an imported Queen just from Italy. She was brought by an old acquaintance, and we feel as much confidence in her, as if we had brought her personally. He started with 30 and brought home safely 27; is not that pretty well? As she cost us $15.00, we did not dare risk an introduction, and so placed her and accompanying bees, on three combs of hatching brood, carefully brushing off every bee as they were taken from the hives. This was the 22nd, and to-day—25th, they are a fair little colony.

WE have just learned of the sudden death of one of our number. A letter from him appears in Heads of Grain, written apparently without a thought that he was so soon to leave all things earthly. We learn his bees will a great part of them be sold soon. Address as per advertisement in May No., M. Miller, Peninsula, O. May peace be his lot, and that of all other good Bee-Keepers', when they leave us, for that Great Unknown other World.

IN answer to many inquiries, we would say that we would have no hesitation in feeding the honey, and using the combs of colonies that died in the winter, providing it be fed in warm weather. Get it worked up into brood if possible.

We have never heard of any trouble during the hot summer months. We would feed it in the combs by all means, and it may thus be made to save an equal amount of our finest honey if it is not first quality itself. The combs are very valuable for building up stocks, and the honey stored or sealed up in them, we think in the best shape to feed it can possibly be.

ALL about the Averill Chemical Paint, how to use it, how much it costs, how much is needed for a square yard of surface, etc., etc., can be gathered from the price list and sample card, that will be furnished on application to the Co., whose advertisement see in this No. We have remarked more than once before, that we would use nothing else for bee hives, and we now add that we should never think of hiring a painter, even had we one hundred hives to paint yearly. Our paint pot was last used, and put away with the brush in it, Nov. 22nd, and remained uncovered and untouched until May 9th, a period of nearly 6 months, when it was brought out and a couple of hives painted in good shape in less than 20 minutes; yet the paint is dry enough to handle without soiling, in a few hours afterward. And best of all, it runs smooth itself, no matter how inexperienced is the hand that puts it on.

WE would be very glad indeed, to be shown that an efficient Extractor could be made for $1.00, but from an examination of one sent us by Mr. A. N. Draper, of Upper Alton, Ill., we fear it cannot be said to be a decided success as yet.

The machine is a tin case something like a dripping pan, having a sheet of wire-cloth framed in tin, laid over the top; the comb is laid on this, and the whole apparatus is whirled about the head by means of four cords attached to the corners.

The apparatus will certainly work, (but the wire-cloth will need to be better supported than in the sample sent us), and for a very few hives it *might* give fair satisfaction.

As the case must be emptied for each full comb, the work must necessarily go on very slowly, and all things considered we fear few would be content with the implement; especially after the number of their colonies had increased very much, as bees may always be expected to do.

ALTHOUGH we have criticised the *Bee World's* typography etc., severely, it was not done with the intention of injuring Mr. Moon, but on the contrary, with the hope that it might induce him to be a little more careful in his proof reading. We believe 'tis well known that the most powerful corrective of bad spelling, punctuation etc., is the ridicule that generally attends "short comings" in that direction; whatever comes from the press uncorrected, is sure to be pointed out sooner or later by some one.

We are well aware that GLEANINGS contains errors in spite of the best we can do, and value criticism more than we do commendations; for how are we to improve unless errors that we overlook are pointed out to us, by those who notice them? When the *Bee World* comes to us with no more errors than are to be found in Bee Journals generally, we will give the Southern Bee Journal a permanent advertisement gratis. As Dr. Jewel Davis, seems to have misunderstood our motives in the matter we would respectfully defer the matter to him.

* * *

On Sunday, the 24th, we noticed in the morning, that a populous colony of ants had located, and were flourishing under the door step of one of our weak colonies. We went for the "tea-kettle" but not finding it hot, concluded we would postpone until a *week* day our intention of treating them to a bath of boiling water. We do not resort to such extreme measures usually, but they had begun to extend their nest clear into the hive and were evidently annoying the bees. About 2 o'clock these bees swarmed out; before we could find the Queen another colony caught the note and in less than fifteen minutes, five had left their hives and all was confusion. We "got around fast" for a while, if it *was* Sunday, and soon had all the Queens in cages on the top of their own frames, and watched the bees whilst they dispersed to their respective homes. The fever however did not leave them for several hours, and every attempt to release the Queens was met with such fierce attempts to sting them that we left them caged. All five were very weak, and the Queens had laid several eggs in almost every cell inside the cluster. This occurred just when a lot of young bees were taking their first flight.

* * *

We once before mentioned, 'twas out of our province to defend the Darwinian theory here, and we say again that those who have a curiosity in the matter had better read Darwin. We will however say this much, that Darwin never tells you a thing *is*, or *is not* so; he has aimed rather to present facts that many of us have already observed, and then mildly asks the reader if if does not seem probable that such, and such results came about in such a manner. Agassiz on the other hand most positievely declares they did, or did not, originate in the manner he supposed.

B. K. M. says in April No., "'natural selection' can never change a honey bee into a wasp etc." Now although Darwin does not so teach, as we understand it, we would like to know what right the Editor of the above, has to be so positive. How does *he* know? As to how the bee existed while his proboscis was being acquired "gradually," we would suggest that they then worked on flowers of a moderate depth. Should a certain Queen's progeny be enabled to get honey from red clover, because by accident they had a longer proboscis than their neighbors, would they not stand a better chance of wintering and thus perhaps perpetuate such a race of bees? *We* never saw so much to call forth admiration and respect for our Creator's works, as since reading Darwin.

QUEEN REARING.

It is with some hesitation we undertake to direct in this matter, and we have delayed these papers to see if it were possible that the manner in which Queens were reared, had any thing to do with the great losses in the spring of this, and the past three seasons. While a few instances might seem to indicate such the case, the majority do not, for we have precisely the same state of affairs where common bees, box hives, and natural swarming were the rule. We shall take great pains to recommend nothing here, that has not been fully tried; and while we cannot promise to enable you to "make a sure thing of it every time," we will endeavor to come as near it as we can.

We need hardly say your colonies should be all strong; our experience this spring with small clusters of bees has convinced us more thoroughly than ever of the bad policy of attempting to do any thing with colonies whose Queens are crippled in their egg-producing powers, by want of bees to cover and care for the eggs and brood.

Very small nucleus hives, seem to answer very well in the hight of the season, but taking all things into consideration, we should feel much safer in recommending such a hive as the standard with a close-fitting division board. Bore a hole through the back end for an entrance, and adjust the division board to accommodate two or three frames. For fear the quilt might allow bees to pass over the top of this board, we will tack the quilt to it slightly.

Place in this apartment about two frames, partly filled with brood, and a third with both honey and pollen, with the adhering bees on all. As soon as they have become organized, which may be known by their gathering pollen and repelling robbers, we are ready for Queen-rearing. Instead of depending on a book, or a slate and pencil *we* should very much prefer the Queen Register cards, illustrated on the cover of this No. From your choicest Queen, imported if possible, give each nucleus a piece of comb containing eggs, at least once in every three days. As the original brood will soon be gone, all Queen cells constructed by whatever accident, will be from your choice brood, and may be used without hesitation. 'Tis quite a task to *cut* combs so as to have these pieces fit nicely, and quite a number of devices such as small sectional frames of wood,or thin tin, have been used; but we find quite a difficulty in getting the Queen to deposit eggs in such divided frames, as she does in a whole brood comb; again, taking a whole frame for each nucleus every three days would soon rob our choice Queen, besides our nuclei could not care for one tenth part of the eggs, if we did.

We last season, cut our comb of eggs into small pieces, but in that case we were obliged to cut holes in the nuclei combs to fit; a difficult, besides being a tedious job, and it spoils the beauty of a great number of fine combs, in a short time. Of course, after all this, we have a remedy to offer, and 'tis simply to get a new biscuit cutter of your tinsmith, and file the edge of the tin to a sharp knife edge. Cut a larger hole in the back, that you may push out the piece of comb readily, and by turning your cutter around as it goes through the bases of the cells, you may cut pieces from two combs and swap them, in a trice, and so neatly that the bees will make all smooth in a very short time. When you cut a cake of eggs from a comb, push in the piece that came out where you made a place for it, and when you have cut as many "cakes" out as you can, give the whole frame with the remaining scattered eggs, to one of the nuclei. When you can make all this work to suit you, as we feel certain you all can, we'll give you another paper.

A little oil will make the cutter work more smoothly.

P. G, objects that we have not given the reasons for advising that the nuclei be given fresh eggs every three days. They are fourfold: First, that their population may be kept up; secondly, that all hands may be kept employed; thirdly, to keep the bees at home when the young Queen goes out, and lastly and most important of all, that there be no possibility of cells or Queens being reared from any other than choice brood, even should some accident happen to the Queen.

ARTIFICIAL SWARMING,

consists simply in giving these nuclei, as soon as they have laying Queens, combs of brood, from strong colonies, until they are good colonies of themselves. See page 72, last paragraph.

ALL ABOUT SMOKERS.

[*ALL WE KNOW ABOUT 'EM.*]

MR NOVICE & Co.—Please give us the easiest and best method of *smoking bees*. This may appear to some of your readers a very simple request—that any one knows how to smoke bees—well I must confess I for one, do not. I have been using a short iron tube with a plug of wood at each end, the plug at the firing end removable. I get a full share through this end into my eyes and nose. I saw Mr. E. Kretchmer's advertisement, A "*Bee Pipe*" to direct the smoke where needed, eyes and nose perfectly safe, price 40c. I ordered one forthwith—rec'd it, loaded up—the *soft solder melted down*, my new 40c. *tin* smoker tumbled down—burnt my fingers—eyes and nose received full charge. Mr. Quinby's blacksmith forge arrangement is too big and unwieldy—I apply to you for relief—please help, "NUMPO."

Our first smoker was tobacco, rolled up in a rag, and we blew the vile stuff in their poor little faces and eyes under all circumstances and conditions, and at all times, whether they were cross or not, and many times when they stood in the door of their own domicile without any feeling of ill will, or evil designs toward any one on the face of the earth. But smoking them was a part of the programme, and smoked they must be, so we thought; and we really pity them now, when we look back and think of it. After a while we got out of tobacco and tried the rags alone and they did very well; pretty soon Mrs. N. got out of rags—we burned such an awful sight of 'em—and 'twas such a bother to be fussing so much, rolling them up etc., before we could do anything, that we felt grateful to Dr. C. C. Miller, now of Chicago, when he paid us a visit and demonstrated that rotten wood was not only as good, but even better. After that, we had our chunk of rotten wood, and went on our way rejoicing until we burned up a hive of fine Italians, by sparks blowing in the sawdust. Then we read over the *A. B. J.* and made a tin smoker with wire-cloth and a knob to blow through, this worked beautifully to be sure, but who could watch a smoker to see that it didn't "go out" when intent on the interior of a hive?

Well, it had to be tinkered so much to be kept "going" that we got out of all patience, at being obliged to fuss so long just to open a bee hive, and so we threw it away—no, we put it "in the loft" and by the way if that loft isn't getting to be an "old curiosity shop" we don't know.

Now 'twas Gallup we think, who said a pan of chips was just as good as any thing, for it could be set one side and would burn nearly half a day; and if you found you didn't need it at all, why, all the better, but 'twould always be ready if you *did* want it. We never like great clumsy implements so we got a nice little tin basin, and it worked beautifully till the pesky thing got hot and burnt our fingers, when we picked it up excitedly. If we remember rightly we set it down again, and made some remarks; can't say now what the remarks were but think they were *not* concerning the weather.

Shortly after, we saw Mrs. N. using a very pretty, small, enameled sauce pan, in her culinary operations, and we innocently asked if the handle never got hot?

"Certainly not. See how thin and light it is."

As she persistently declined listening to any proposal to trade it for our tin basin, we bought a "bran new one" for 40c., at the "tin shop," put in some coals of fire, some rotten wood, and from that day to this, we have had no trouble. Fire will keep in it an hour or two, any thing will burn in it that is dry. For a brisk smoke in a hurry, we sprinkle on a little saw-dust because 'tis always handy, and if placed at the windward side of an open hive, the cloud of smoke that arises is all that is many times needed, and it requires almost no attention. We should add before concluding, that we have a square tin box—bought at the druggists for a few cents, (they get them with Castor oil in, or something) large enough to set our sauce pan in, out of the rain, and also to contain the fuel, that we scatter around, when we *wish* it to go out. The opening being on the east end, our fuel is always dry, and when scraped into the sauce pan with a few live coals from the kitchen stove, it is all in running order, and the faster we travel about with it the more it smokes.

We can't imagine how "cog wheels" or "bellows" would add to its efficiency, and when we take into consideration that 'tis very often allowed to smoke away for hours without being required at all, it seems to us that its greatest merit is its simplicity. Occasionally a *stubborn* colony will need considerable smoke, but the practice of "smoking" them until Queen, workers and all, tumble "pell-mell" on the bottom-board, when they haven't even "said a word," it seems to us is barbarous, and he who does it should have the "machine" pointed at his own eyes until he sees how it is. Now don't undertake to use utensils made with solder, for they will just prove a bother.

At least two persons, whose eyes will meet these pages, have tried old brittannia teapots, and when the block tin melted and caved in, they concluded they wouldn't do "first rate."

P. S.—"P. G." remarks we have only considered one side of the question. The other side is, that occasionally our "pet smoker" gets going at a rate that sometimes makes one think they had almost as lief be stung to death, as smoked to death; to which we reply, 'tis a matter easily remedied; take out some of the fuel and make it "go slower."

A subscriber from Middlebury, Vt., writes;

Wormwood was first used by us in subduing bees in the summer of 1872. We were almost overpowered by a swarm, and had tried a great variety of articles such as rotten wood, rags, tobacco, catnip etc., when my son, a lad of twelve years proposed to try wormwood; and we were happily surprised at our success, and now I would [illegible] without it.

A. C. Hooker.

Heads of Grain,
FROM DIFFERENT FIELDS.

MESSRS A. I. ROOT & CO.—I am trying for "Bees and Honey." I have nearly completed my high fence of plank, on your plan for an Apiary. I have nine colonies in good condition at present; lost almost all my bees last winter, by bad management I think; I will try to do better in the future. I read the *A. B. J.* and GLEANINGS with the greatest imaginable interest. I intend, if the Lord permits me, to fix up my bees and Apiary nice. Success to you and GLEANINGS, and may you long live to strengthen the "Brethren" and such beginners as your humble servant.

Parkersville, Ky. Dec. 22nd, 1873. C. LARKINS.

We are right by your side friend L.; we are certainly going to *try* and do better, but whether we shall succeed, or not remains to be seen. We trust *your* nine colonies, are nine this spring.

FRIEND NOVICE:—I have 23 out of 25 colonies, wish they were all in about 15 hives with the best Queens-think they would be more profitable than as they are; they are gathering a little pollen but no honey. Those that were the best last fall are the best now-used fire heat to keep them warm in the house-see no bad effect from it-endeavored to keep the temperature from 40° to 45°. HENRY PALMER.

Hart, Mich. May 2nd, 1874.

FRIEND NOVICE:—I have been trying to keep bees in Texas four years. This is certainly a fine bee country, as we have no expense or trouble in wintering bees, and there is almost an endless variety of flowers. from which bees gather honey. The best that I have a knowledge of, is the horse mint. I do not think however after all, that bees gather more honey here than with you, as the honey season is frequently cut short by dry weather, and perhaps on an average is not longer than in your State. The advantages here are, no expense or trouble in wintering, and facilities for early Queen-rearing; last fall I put up ten Queens in my small hives or boxes, made to hold three frames, with a sufficient number of workers as an experiment, and this spring I had eight good tested Queens as the result, shall try it on a larger scale next winter. I opened one of my Italian colonies to-day, from which I had removed the Queen nine days since, and found 31 Queen cells; many of them were so close together that I could not cut them apart without injury. I never saw or heard of as many Queen cells in a hive before, did you?

Austin, Texas. Apr. 6th, 1874. T. KEMP.

MR. ROOT, Dear Sir:—Two colonies of the ten in the bank cellar are confined to their hives and have no chance to fly, only when set out; one of the two colonies has as fine a looking Italian Queen as I ever saw; she was reared last June and has not laid an egg that I can find up to writing. The other had a Black Queen which must have stolen into the hive late last fall and killed the Italian Queen. I killed her March 1st, she had eggs and capped brood at the time. March 12th, the colony had as nice a capped Queen as is often seen, destroyed her and gave them brood and eggs from an Italian stock.

April 9th—Had a hatched Italian Queen.

April 19th—Looks nice, but no eggs and no drones to fertilize her.

CORN STARCH DID IT.

I have been trying corn starch for pollen. Melted candied honey without water and while warm mixed in it a table-spoonful of dry starch, to a half pint of honey, and on the 6th day of April strewed it on top of frames of a colony on summer stand, that had no pollen, brood or eggs. They ate it readily. They gathered no pollen up to this date, April 19th, at which date I examined them. They now have eggs and capped and uncapped brood in two combs.

I have used corn starch differently prepared on other colonies, but the result not so decided.

Fire heat in cellar works right. No loss in bees or colonies. Old bees as strong to-day as first of March, that is, the loss of the old wintered bees is imperceptible. Yours truly, M. MILLER.

Peninsula, O. April 19th, 1874.

We have this spring for the first time noticed Black colonies that had brood, while the Italians had none. One Apiary of 27 colonies —Blacks, wintered finely in a neighborhood where the Italians have nearly all failed. The only particular difference in treatment that we know of, was that the Italians were used for Queen-rearing until quite late, and the Blacks were in box hives and gave no swarms and had "no treatment." 'Twill be advisable to "go slow" forming conclusions in the matter, but if the Blacks *do* really rear more brood *early* in the spring 'twill be well to know it.

'Tis very likely the Italians in their eagerness, have flown out during our bad spring weather, and got lost when the Blacks did not.

Before being positive that the "tablespoonful of starch" had any agency in the matter, should we not decide by experiment whether the result would not have been the same, had that been omitted, from the honey fed?

Will you please describe the "Straw mat" in GLEANINGS? How are they made? how thick are they? what are they sewed with? or are they braided? I know how straw hives are made. Anything like them? Thanks for wax extractor. Have just made one—cost 80 cts.—works good. That plan of H. Palmer page 29, and my plan, page 16, will work in conjunction nicely as I understand it, and I mean to try it. Bees will store honey as far from entrance as possible. WM. H. KIRK.

Waterbury, Conn.

Very well, just wait until we fix a heading. There!

STRAW MATS, HOW TO MAKE THEM.

From Peter Henderson's excellent work entitled Gardening For Profit, we glean the following:

"Straw mats are, however, by far the warmest covering, and in hot-bed culture are almost indispensable. They are always made at home, during wet days or stormy weather in winter. The manner of making them is very simple, and will readily be learned at the first attempt. The "uprights," (or warps), are formed of five strands of a tarred string, known as "marline;" these are tightly strained 10 inches apart, by being attached to five strong nails at bottom of a wall, corresponding with the same number, 7 feet from the bottom. Against these strings (beginning at the bottom) are laid small handfuls of rye straw, the cut side out, as long and straight as can be procured; this is secured to the uprights by a lighter kind of tarred string, by taking a single turn around the upright and the straw, and so continued until the mat is finished. Some use a frame to which the strings, forming the warp, are attached.

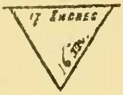
This allows the operator to have his work upright or horizontal, as may be most convenient. Two workmen will make about five mats in a day. When finished, the mats should be 7 feet in length and 4½ feet in width, two being sufficient to cover three sashes. The reason for having them made one foot longer than the sash is, that there may be 6 inches to overlap at top and bottom, which are the most necessary points to secure from frost. In making these mats they may be constructed of sedge from the marshes, or salt meadow hay, when rye straw cannot be procured. It is important, however, that they may be made as light as possible, one inch in thickness being quite sufficient. By care in handling them, these mats will last for six or eight years."

The mats for Hives, would not need tarred string, as they are not exposed to rain and sun, and the distance and number of the strings as well as the size of the mat, should be arranged according to the size of the hive.

In a second letter, friend K. explains that his 80c. wax Extractor was made by using a lard pail, an old wire-cloth dish cover, and sundry other utensils found at home, so that 80c. was only what he paid the tinner.

There seems to be a diversity of opinion, as to whether bees prefer storing nearest, or farthest from the entrance. In our opinion, 'tis governed more by other circumstances, than the locality of the entrance.

FRIEND NOVICE:—Please let me know through GLEANINGS, how a frame like this would be. D. N. KERN.
Shimersville, Pa.



Well, we should think it would be tri-*angular*; so far as practicability is concerned, we have known such hives to give very fair yields of honey, as in fact we have, hives containing frames of every size, shape and dimensions, almost. The principal objection is, that it does not enable the bees to keep in a compact cluster, the sharp corners being very unfavorable in that respect. The idea has formed the basis of several "patents," but we believe it has been invariably abandoned after a short trial, like the great bulk of the patented devices in general.

What time of day do you consider best for examining hives, or extracting?

Any time of day when the *bees* are at work; and the more they are flying the better, always providing no robbing is going on.

How do you examine a hive in early spring and ascertain condition, when it is continually cold, as it has been this spring? I waited *weeks* to see what condition mine were in after being *moved twice*. They told me I must wait for a warm day, so as not to chill the brood. It was so cold most of the time that in trying to examine them, lots of bees would fall down chilled. I read about persons examining in early March, but can't see how they do it unless they have different weather. About how should the thermometer stand to make it safe to expose brood?
Manchester, Iowa. MRS. E. M. MUCKLER.

In this last matter, we fear we are really unable to give any advice that would help you, unless it were "don't." Of course if bees are starving they must be fed, but otherwise we should not open the hives unless the weather is warm enough for them to fly. Such days usually occur in March and April, but when we have such unfortunate seasons as the present, we really know of nothing that can be done. We have no reports from those having kept their bees in the cellars until the "flowers bloom," as Quinby advises, but feel sure ours would *all* have died ere this time. If we could manage to have brood-rearing go on while the bees were yet confined to their hives, it might do. We have utterly failed in such attempts, but should be pleased to hear from others.

There were 40 stocks of bees of the Apiary I am now managing, wintered in the cellar without loss (natural stores). Were put in 28th of Nov. '73, and put out March 18th, '74. Cellar was quite damp and many combs moulded on that account. They are doing finely now and taking in dampened sugar whenever they can fly (honey also at times) without showing signs of robbing. We brought them to this condition gradually by feeding dry sugar first, and robbing that was being carried on extensively, before commencing to feed, by some bees brought from Tenn., has now entirely ceased. D. LYONS BROWN,
Indianapolis, Ind.

My bees of which I have 13 stands (all Black) are doing well. I intend to get some Italian Queens this summer, but think it will be impossible to breed pure Queens from them, as our woods are full of Black bees. J. S. ROGERS,
Columbia, Texas, April 15th, 1874.

So far as *honey* is concerned, you need have no fears but that you can get the full benefit of the Italians, even under the circumstances you mention. Rear all Queens from one tested one; persist in this every season, and Italians will soon be the rule and blacks the exception.

I want to Italianize as soon as possible. Have thought I would like to get the *dollar Queens*. Some have told me that they would be poor things and would not pay. But I feel just as though I could trust Novice, and if you are going to have *dollar Queens*, I think I will try a few, if I can get them in season. MRS. E. M. MUCKLER:
Manchester, Iowa.

What we have advised as "dollar Queens," were to be precisely the same as other Queens, only that they were sold as soon as fertile, and before they were tested. He who would sell Queens *known* to be poor, as "Novice Queens" as one advertiser expresses it, would be doing a dishonest act, for our purpose was to have them sold before the producer had an opportunity of knowing whether they were of extra value or not. Of course we should expect any honorable man to tell us if a Queen were poor or worthless, if he knew such to be the case.

We do not expect dollar Queens can be reared *early* in the season. Those who want Queens in May and June, must expect to pay such prices as those fortunate enough to have them for sale, may choose to ask.

Oh yes! About my bees; as I told you, they were killing their Queens. I lost 6 out of 20, in a day or two, but the very day that I wrote you I filled one frame with syrup for each hive, and have done the same twice since, and had no more trouble in that way. The Queenless ones all pegged out but one, which is hatching eggs very satisfactorily at present. I *think now* that low stores and as you *say* "nothing to do" was the trouble. Cold, cold, nothing but cold, and the bees nothing to do but to eat what you feed.
Valley Mills, Ind. Apr. 23rd, 1874. J. J. WHITSON.

Friend W. wrote us in March, that his bees were killing their Queens every day. We advised that they should be fed—kept busy at something, whether they had plenty of food or not.

DEAR NOVICE:—I feel as though I wanted to take right hold of your hand, but I suppose I can't, so please send me all the GLEANINGS in Bee Culture. I should have sent on last year but my health was so poor that I had little ambition for anything. The season was very short last year, the honey harvest only lasting about three weeks, but during that time my hundred stocks (I had about 112, but the surplus came from about 100) were able to store enough for winter and give me 4500 lbs. in boxes for market. I have all my bees in one place. In the fall I packed 96 colonies in saw-dust, or packed saw-dust at the sides and on top in place of honey boxes, and left them on their stands; I put 24 colonies in the cellar, and on the 1st of Dec. I left for California where I spent the winter, leaving directions to have each hive examined once in two weeks, to see that the entrance did not get clogged with dead bees.

It was hard to leave my little pets thus behind me in the cold, and although I enjoyed the pleasant climate of that strange land, it was most pleasant to return home again. which I did on March 16th, after an absence of three and a half months. On reaching home on the evening of the 16th I went to one hive out of doors and gave it a little thump, whereupon the bees inside set up a joyous welcome, as much as to say "we are all right, don't worry." Next day I examined every hive out-doors and in the cellar; all responded. and later I carefully examined every hive and found all alive and in good condition, except a few that were Queenless and those had plenty of bees. The 96 out of doors wintered much the best I believe. Some of my stocks wintered in-doors showed some signs of dysentery, those out of doors no signs of it. Those stocks wintered out of doors appear to be much the strongest in numbers this spring. April has been very cold, but little brood in hives yet, especially, those wintered in cellar.

Hurrah! for a bag of saw-dust over the brood chamber. and saw-dust at the sides, as well as on the ground in front. Yours in all brotherly love.
Bridgeport, Vt. Apr. 29th, 1874. J. E. CRANE.

We should have more faith in the "bags of saw-dust," were it not that bees so often winter well under almost all circumstances. 'tis hard to decide to what particular circumstance the credit belongs. Strong colonies would doubtless get along well prepared in that way, but we have so many times seen the evil results of depriving weak stocks of the benefit of the direct rays of the sun, that we think considerable caution should be used in deciding to adopt such methods as applicable to our Northern winters generally.

FRIEND NOVICE:—I am not an expert in Bee-keeping, and I don't know that I can write anything that will be very interesting. I have kept a few stocks of bees for eight years in the old box hive. I thought all that bees wanted, was a hive and a super and they would do the balance of the work themselves. For six years I didn't get enough honey to pay for the nails I used to make their hives: I got hold of a Bee Journal and read it, and soon found I was in the dark in bee-keeping. I have been using the American hive for two years, the first year I got from three stocks Blacks) 61 lbs. of surplus and no increase, in 1873 I took 135 lbs. surplus, and made four new swarms. Bought two stocks Italians last fall and have now 9 stocks all told. Am going to Italianize all my Blacks this spring, they are all in good condition. I have none with less than 4 cards of brood, one extra stock has 9 cards brood that will average 6x10 inches square. Wintered on summer stands— get extractor calculating on taking, well I'll say 600 lbs. this season if favorable; for fear of being too tedious I will quit for this time. Long life and success to Novice and GLEANINGS. N. W. KERSHAW.

Hope, O. April 24th, 1874.

For the Simplicity hive (Langstroth what sized blocks would you use provided the entrance was the same as in Langstroth hive? I think of trying one each way, the bottom-board could project a little as in the old form of Langstroth.

Would it not be better for me to adopt the old L. frame as a beginner, and for Nucleus hives have frames just one half the size? I ask you because it seems the most natural to my mind, easily transferred etc. How deep is a Simplicity hive (exact) when completed? ENQUIRER.

Bolivar, N. Y. Apr. 25th, 1874.

Blocks for the L. hive should be made so as to just close it, when both are turned with longest side toward the entrance. Dimensions given in Mr. L.'s book are 7/8x4x5¾x7. In using double width hives, with entrance at side of combs, entrance blocks must be used of considerable length, especially with the L. frame. Where division boards are used, there is a decided advantage in the latter, for a readjustment of this board, in no way interferes with the entrance, as it does with the ordinary L. hive. We cannot see that the L. frame is more especially suited for beginners than some others. Simplicity (Langstroth) is just 10 inches deep when cover is raised.

April 30th—Prospects look very discouraging for bees, worse than ever since I have kept bees; had rye and oats ground March 19th, and there has been but one day on which they have worked on it to any extent. Snow, wind or cold, every day, snow now over a foot deep, snowed all day to-day, and blows like fun now. Examined two or three hives last week, they have stopped breeding, not even an egg to be seen. Have lost 4 stocks out of 27, saw a man the other day who has lost 10 out of 32, another, 5 out of 13; have not heard from others lately.

In regard to sending Queen eggs, it seems to be considered a failure, but I think it can be done safely, eight years ago I bought 20 Italian Queens, from St. Albans, Vt. they were sent 10 at a time, in small boxes holding a frame 4 or 5 inches square; after taking the Queens out a number of the bees collected in one of the boxes in which a Queen had laid eggs on the passage, and reared a Queen.

Why could not boxes be made of thin boards or paste-board, and enough bees used to keep eggs warm? even if it cost more than 25 cts. for eggs from a choice Queen customers could well afford it.

May 1st—Have been shoveling open road! how is that for early swarms?

May 2nd Cool, lots of snow yet.

Am not discouraged at the poor prospect. Bees have paid well heretofore, and believe they will yet.

Gallupville, N. Y. BENJAMIN FINCH.

Such a plan might be made to answer, (in fact we attempted it last season) but so many bees will be required that with the brood to sustain them on a long journey, 'twould be rather bulky by mail. As the Queen in such a case must generally be a hybrid, would it not be better to put in laying Queen after we have everything ready, and charge a dollar?

Two years ago I found a wild swarm, and another a year ago, and one this year on 24th of March, on a bush bo't two Italian Nuclei less than one year ago. Now have 10 Italian stocks with Queens—most of them not very strong—and 5 common stocks. Just now bought 7 common stocks. I wrote you I lost my first Queens except what I used, and sold only one.

I am taking great pains for purity; I breed from warranted stock and could give the *best* testimonials of integrity—will soon have more Queens but who will buy them from me? Of course I must have them laying and sell for one dollar. Some of them are dark, shall I reject them?

I am the first beginner in Italians and *movable* combs, here but sir there is a perfect furor of excitement at my success etc. J. B. RAMSEY, M. D.

Abbeville, Vermilion Parish, La. April 27th, 1874.

Unless the Queens are quite dark, we should assuredly use them, if we were satisfied they were from a good mother. The most profitable Queens are often rather dark in color, but we should be suspicious of a mother, that gave many dark colored Queens.

Friend R. asks "who will buy them?" now cannot we "kill two birds with one stone" by giving the following:

A. I. ROOT & CO.—Please on receipt of this send me word whether you have any of those "One dollar Queens." I want one immediately for a Queenless stock belonging to a friend. I got two of you last year through S. S. Shuster; this friend of mine also got a Queen; we like them very much, will you please answer this and tell me the earliest time you can send a Queen and I will send the order for $1.00.

Frenchtown, N. Y. May 4th, 1874. A. W. LUNDY.

I moved my Apiary this last winter about two miles from its former place, and put it up on the hexagon plan eight feet apart, and have lost one third of my colonies by my bees gradually quitting or losing their hives, and entering others. I almost daily see laden worker-bees, seeking to enter hives that are closed.

Now I would like to know what the matter is, and what to do. Yours truly, JNO. J. JONES.

Culleoka, Tenn.

If your hives are *eight* feet apart, we feel sure the arrangement can have nothing to do with your trouble. Bees are many times kept successfully, in strait rows, as close as two or three feet apart, although this is perhaps not advisable. The hexagonal plan as we have given it, gives six feet distance from center to center, and we have never seen any trouble from bees mistaking their hives, nor have we ever before heard of a complaint, although many such are now in use. As this shape very materially lessens the labor of the Apiarist, our friend should be quite sure he is not mistaking the cause of the trouble, before he draws a conclusion.

Our hives are all painted one color—white, and we prefer this color because dark colors are apt to become too hot if the sun should chance to strike them in very hot weather. We believe friend J. that experienced Bee-keeper's can give you ample testimony that 6 feet apart is perfectly safe. Most Bee-keepers are aware, that stocks when first set out on a new location, sometimes get badly mixed up, even when the distance is considerable; as our Apiary was peopled gradually, we of course have seen no such trouble, and were it not for the danger of young bees crawling into the wrong hive when extracting, we should have been tempted to locate them still closer.

The quaint truths contained in the following, are so much better told in our friend's own language, that we have decided to give it just as it comes to us. The "curtain arrangment" has certainly worked well in his case, at all events.

A. I. ROOT & Co.:—I will give you a few words about my bees; we have a late spring. we had not many fine days, yet sometimes we have half a day sunshine, then it gets cloudy again, but my bees did work on rye flour every sunny day from early Feb. up to this date. April 21st. They commenced to gather natural pollen the 18th of March, but they did not stop working on the rye flour, as I have often read that as soon as they could get natural pollen, they would not take the flour any more. But I did find out that they would take it longer if they could get it. I have got eight colonies, and they did carry about ten quarts of rye flour in their hives. My *bees* are all strong, the hives are crowded full, yes, strong enough to swarm. Now I will tell you how I did winter my bees. I have got a shed six feet high in front and five feet high in rear, boarded tight on three sides; in front I have got heavy muslin curtains to roll up or let down at will. Every fine day I roll them up, on cloudy and windy days I leave them down. I have the curtains down every night, that keeps the cold air from blowing in at the entrance. I lost one small colony, it got short of honey and I tried to feed it with syrup in one of E. Kretchmer's Bee Feeders, of Coburg, Iowa. I put the feeder on the top of the hive, and they took the syrup down in a hurry, but one of my hybrids robbed them of their syrup in the day, what they would carry down through the night time. I had the entrance small so that only two bees could pass. I always thought if we would be careful and have no sweets around the Apiary there would not be much damage about robbing, but I think there is a screw loose somewhere. I know a man who lives about two miles from my house, he does feed his bees on plates in the yard, every spring, and he never had any robbed. I thought I did know more than he did, so I fed mine on the top of the hive and it got robbed. D. N. KERN.

Shimersville, Pa. April 21st, 1874.

My bees wintered well. I had them in a dry cellar, but not a still one I assure you, for were there not two young bee-keepers rolling and tumbling over their heads, in such a manner that when one was down there it seemed as if pandemonium had broken loose? If those bees were the worse for it, I have yet to learn it. All came out alive, but on the first day's flight two of them "go-ed" out and united with other hives, leaving brood, eggs, pollen, and honey.

Please excuse my garrulity, but while I think of it, I would say

A TIMELY WORD IN REGARD TO POLLEN.

I will tell you how I get plenty of it for nothing, and it seems as if you might do the same. From the middle of July to middle of Aug., I drill in both sweet and common field corn for late green fodder for our cows, and the bees will work on it until the frost has killed it; even after light frosts had killed (last fall) the outside and tops of the highest, there was some left underneath that was not touched. and some not even the tops garlanded, which the bees worked on, the middle of each pleasant day, until the season closed. I had buck-wheat near the corn, and while in bloom it was hard to tell on which the bees were thickest. If you have a cow and a piece of land, try it, and no doubt the testimony of honest old roan in the milk bucket, and also that of the honest busy bee, in the stores of pollen, will corroborate all I have said in regard to it. J. M. HILL.

Greenville, Ill. May 12th, 1874.

Much obliged friend H. Our bees did get considerable pollen from the corn last season, until the grasshoppers contested the matter so hotly that they were forced to give it up. Let's see! We wonder if we can't lay the blame of our losses to the grasshoppers? It never occurred to us before, and it's quite a relief to be able to lay the blame somewhere; no matter where, so some of it is off our own shoulders. We really believe "corn starch" would be a success if the bees could take it direct from the corn blossoms; sweet corn too, is an experiment that nearly all of us can try with almost a certainty of having the fodder pay all expenses.

How long will one table-spoonful (equal 4 drachms) of honey or syrup furnish food for a Queen and 30 workers? Fear we shall get a poor harvest of honey this season. Nights and mornings too cool for secretion to take place, in this section at least. Am I right Mr. Novice? My bees are doing their very best to collect the little there is. J. H. WILSON.

Lexington, Texas.

Nothing but a careful experiment would furnish a correct answer. From experiments made last season, we would estimate it at 5 days. Thirty bees are more than are generally sent with a Queen.

Please inform me the price of your tea-kettle Bee-feeder, how it is used, and how constructed. With how many Langstroth frames of brood, with bees on, can one start a swarm? GEO. HEATER.

Flat Rock, Ohio.

We "sposed" every body knew by this time, but for the benefit of those who don't, we will go over it again.

ALL ABOUT TEA-KETTLE FEEDERS.

Tell your tin-smith to make you a tea-kettle of the cheapest tin without cover, handle, or spout. Solder a flat piece of rather coarse perforated tin over the place where the cover usually fits; put a large sized screw cap, such as is used for oil cans, at one side of the perforated tin; this is to fill it up by, and answers as one of three legs that support it just over the cluster of bees, in an inverted position. The other two legs are made of a strip of tin 1¼x4 inches folded like a letter V; these are soldered at equal distances from each other and from the screw cap, just outside of the perforated tin cover.

We place them directly on the frames, but Adam Grimm uses them over one of the holes in the honey-board; in that case a rim of tin high enough to allow the bees to go under, is perhaps better, but when used on top of the frames we prefer the legs. To use it with the Simplicity hives, a second story should set over it while feeding; with the Standard hive, remove a few frames and put it one side of the cluster. If they commence to build combs against it, as they will at times with such an abundant supply of food, put in a division board, reaching within ½ inch of the bottom of the hive. We prefer these feeders to all others, because with little labor your bees can be given an unlimited supply, for any purpose. Your tin-smith should make them for you for $1.00 each, or 75c. if you order a dozen at a time. If he won't do it, tell him they will in Medina. If any body says it infringes on any patent, tell him he is a humbug, and that if he wants proof of the invalidity of his claim, to write us.

Two combs of brood, mostly sealed, with the adhering bees, and a laying Queen, would make a colony, if you could give them empty combs as fast as needed, and the operation is performed not later than June 1st. We have done this with *Italians* several times, but have failed with Blacks. If they have to rear a Queen, say 4 combs; if they have to build the comb also, say 6 combs of brood.

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal for	$2.25
“ The National Bee Journal “	2.25
“ The Bee Keeper's Magazine “	1.75
“ All three, of the above “	4.00

Books for Bee Keepers.

SENT postpaid on receipt of price.

Langstroth on the Hive and Honey Bee	$2.00
Quinby's Mysteries of Bee Keeping	1.50
Bee Keeper's Text Book, muslin,	.75
“ “ “ “ paper,	.40

The above are really all, that we can recommend, and they should be read with considerable allowance for being much behind the times.

Langstroth, is valuable as giving the correct Natural History of the bee; Quinby, as giving a rather more practical view of the industry, so far as dollars and cents are concerned.

King's text book, as being a condensed and alphabetically arranged summing up of the two.

Langstroth, seems to have pursued his investigations with an enthusiastic love of getting at truth alone, and Quinby, with a desire of rendering the business less uncertain in a pecuniary point of view, to the masses. While these two great writers started out, each without a knowledge of the other's work; it is greatly to the credit of both that they agree so nearly in all essential points.

Good Books.

These, though not specially designed for Bee-keepers, have a tendency to inculcate principles that ensure success in bee-keeping as well as almost all other rural pursuits.

The first on the list should be in the hands of every one who has planted grape vines to shade the hives, as we have advised.

Any of these books will be forwarded by mail, *postpaid*, on receipt of price.

Fuller's Grape Culturist	$1.50
Fuller's Small Fruit Culturist	1.50
Fuller's Strawberry Culturist	.20
Fuller's Forest Tree Culturist	1.50
Henderson's Gardening for Profit	1.50
Henderson's Practical Floriculture	1.50
Tim Bunker Papers	1.50
Ten Acres Enough	1.25
Roosevelt's Five Acres too Much	1.50

The two latter should go together, for they are in our opinion, both of them extremes, but it opposite directions. The pictures they give of rural life remind us of modern bee-keeping, for while one is doubtless a truthful delineation of “Reports Encouraging;” the other, is an equally candid recital of the experience of one who it seems was doomed to “Blasted Hopes,” only because he had too much money, and too little experience.

All of the above belong to our own library and are among our most valued works.

Averill Chemical Paint.

THE *ONLY* RELIABLE.
THE *MOST* BEAUTIFUL.
THE *MOST* ECONOMICAL.
THE *MOST* DURABLE.

Requires no oil thinner or drier,
Requires no waste of time in mixing,
Has stood *eight years' criticisms*
With *yearly increased popularity*
And *yearly increased* sales.

Is sold by the gallon only, in packages of from 1 to 40 gallons each, in Purest White and any Color or Tint desired.

Address, for sample card of colors and price list,

Averill Chemical Paint Co.,
Office and Factory 132 & 134 East River Street,
CLEVELAND, OHIO.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

J. Shaw & Son, Chatham center, Medina Co., Ohio.
I. E. Daniels, Lodi, “ “ “
G. W. Dean, River Styx, “ “ “
W. J. Hosmer, Janesville, Minnesota.
Dr. J. P. H. Brown, Augusta, Georgia.
W. J. Standefer, Dry Grove, Hinds Co., Miss.
W. D. Wright, Knowersville, Albany Co., N. Y.
J. H. Nellis, Canajoharie, Montgomery Co, N. Y.
R. S. Becktell, New Buffalo, Mich.
C. R. Williams, Milan, Erie Co, O.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

J. H Martin, Hartford, N. Y.
Geo. T. Wheeler, Mexico, N. Y.
R. S. Becktell, New Buffalo, Mich.

In order to hasten the introduction of the STANDARD Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground	$2.00
Twenty frames for above 5¾ c. each	1.15
Sample Frame, by mail,	.10
Quilt	40
Or all complete except painting, for	3.50
The same in a bundle including nails, hinges etc,	3.25
Extractor made expressly for Standard frames, (Comb frame 14¼ wide, by 10 deep.)	$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

ILLUSTRATED JOURNAL | A magnificently Illustrated Monthly, with **Chromo** $2.50 a year. Send **10 cts.** for sample copy, or **30 cts.** for sample Chromo, terms to agents, etc. **Canvassers Wanted,** in every town, county & State. Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

SCIENTIFIC FARMER | A Richly Illustrated Monthly, $1.50 a year, **Chromo** free to annual subscribers. On trial, three months, **25 cts.** or with Chromo, **50 cts.** Sample copies and terms to agents sent on application.

Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

PLEASANT AND PROFITABLE EMPLOYMENT, for male or female, in every city of the Union. Active persons can double their small investment every day. Inclose STAMP for particulars to

THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

ITALIAN QUEENS.

THIRTEEN years experience in rearing Italian Queens. Average sale each season, 700. All Queens warranted pure, and safe arrival guaranteed. Prices very low, and price list sent free.

6tf H. ALLEY, Wenham, Mass.

Just as we go to press, we are all set rejoicing by the receipt of a fine large Queen, in one of our new mailing cages, all the way from J. B. Ramsay, *Louisiana*, (see page 71).

She was on the way five days, yet seems lively and in perfect health, and came all this distance for a *two cent stamp*. Soft sugar was packed in one of the feed boxes, and a sponge with water in the other. Will not all our subscribers join in three cheers for the success of the plan of shipping Queens from the South?

Bees are working on fruit blossoms, for dear life. at present, and are rapidly filling up their hives. My first natural swarm, this season, came off last Friday, May 22nd. James Bolin.

West Lodi, O

Just like you friend B.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpareil space, each insertion. cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees. and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,	$6.50
Two " " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross,	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,	19.00
Labels for above, " "	.65
The same with printed address, per 1000	4.25

I shall have on hand and ready for shipment from the 15th of June, a large lot of 1 and 2 pound square flint (white) glass honey jars. They are of the same style as my other jars, which are by this time well enough known.

I shall sell 1 lb. (white) flint Glass Jars per gross $8.00
2 " " " " " 11.00

In lots of 10 gross or more, the same as the others, 50 cts. less per gross.

CHOICE NEW ALSIKE CLOVER SEED.

One bushel (60 lbs.) at	$20.00
½ " "	10.00
¼ " "	5.00
One pound, "	.50

Has arrived and is for sale. Also

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

For further particulars, Address,
CHAS. F. MUTH,
1tf Cincinnati, O.

DISSOLUTION AND REMOVAL.

The firm of BALDWIN BROS. is dissolved by mutual consent, the same to date from Nov. 1st, 1873.
L. W. BALDWIN,
A. A. BALDWIN,
P. BALDWIN.

The subscriber, having removed to Missouri, will continue to breed choice Italian Bees and Queens from the best stock that can be procured. Purity and safe arrival guaranteed. No circulars.

Prices:—Single Tested Queens, $3; Two for $5. Six or more, $2 each. Address L. W. BALDWIN,
Wellsville, Montgomery Co., Mo.

DO **TRY IT 3 Months for 10 Cents;** or with $3 Chromo for 50 cents: or 6 months with "The Flowers of Paradise," a first-class $6 Chromo, 15½x21 inches, for $1. The National Agriculturist and Bee Journal is a 16-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75**. Send now for samples, and **Liberal Terms to Agents free.** H. A. KING & Co., 14 Murray St., N. Y. 1w2

AMERICAN BEE JOURNAL. Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

TESTED ITALIAN QUEENS—Sent by mail $3.00 each.

Nucleus Hives, untested Queen, bees and all sent by express for $3.00. Queens bred from pure mothers warranted fertile, with no other guarantee, sent by mail $1.00.

Orders will be filled strictly in rotation.

Address J. SHAW & SON, Chatham Center,
3tf or I. E. DANIELS, Lodi, Medina Co., O.

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to National Bee Journal, now published and edited by
ELLEN S. TUPPER, Des Moines, Iowa.
Liberal terms to Agents. Specimen number free.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address
DR. J. P. H. BROWN, Augusta, Ga.

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular. Wm. W. CARY,
1tf Coleraln, Franklin Co., Mass.

WE can furnish Summer Rape seed, American grown, per pound .20
The same, Imported .25
Above includes postage. If sent by Express 8c. less.
A. I. ROOT & CO. Medina, Ohio.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " " Five " " " " 75 " "
" " " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume I, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. II **July, 1874.** **No. 7**

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee-Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

Bee World. *A. F. Moon & Co.*

[*Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.*]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to conduct an Apiary....73
Problem No 23....Cover
What I have done....74
Wire cloth division boards....74
Water for bees....74, 78
Suspended hives....74
Quilts....75. 78
Grape vines for shade....76
Trellis for grape vines....76
"Primary" Department....76
Our own Apiary....77
Introducing Queens....77
How the moths nearly got the better of us....77
Quinby's new smoker....78
Editorial....78

Page
Blasted Hopes....79
Does an Extractor pay ?....79
Reports Encouraging....79
"Elbow room" for the Queens....79
Queen rearing No. 2....80
Humbugs and Swindles....80
From how far, will bees go home? 81
Heads of Grain....81
Value of little attentions....81
Moving bees in the working season....81
Locating an Apiary....81
More about Straw mats....82
Door-step to hives....83
Shall we have a department for box hive bee-Keepers ?....84

SUNDRY MATTERS.

WE presume you all know that we have promised to put nothing of value on the covers; but they must be filled with something, at least we think so, and we have so many letters of value on hand, it seems a pity to waste any room.

Extractors seem still to be an interesting theme for conversation—no, we mean *postal cards*, and we give a few specimens. If they do seem to favor our own wares please excuse it as 'tis on the cover. While we think of it, some one writes that we have not given Winder's new extractor, in our remarks about it, the credit of enabling the combs to be turned without taking them out; this is true, and we beg pardon for forgetting it, but even then we cannot think this advantage would be anything near a compensation for the great disadvantage of using a heavy apparatus.

Our Extractors are all made now so that the castings are put on with screws, and after the season is over, the whole of the machinery can quickly be removed, so we have nothing but a plain stout can, useful as a milk can, or for many other purposes. In many other respects it has been simplified. We would again most earnestly request our friends to be a little more explicit in ordering. We have in three cases this season, sent the machines arranged for a frame different from what was wanted, and in one case as the machines went a considerable distance, the express charges were quite heavy for returning them and sending others. Our friend in question sent us $18.00 for two Extractors, *wanted immediately*—not another word of explanation; as we had just advertised the Standard machines for $9.00 each *but no other*, we thought we were safe in sending them, but found when they reached their destination that he used Langstroth frames.

Again, a friend in Iowa wrote inquiring if we could send a machine for the Am. and L. frame both; we replied at once, that we often made them so, for in fact a Quinby machine, just took in both nicely, but that 'twould be heavier to manage than one made for either of the frames mentioned alone. He shortly sent us an order but in it made no mention of his previous inquiry, and from the amount of similar correspondence 'twas impossible for us to recollect any thing of the kind. The result was, that we sent an L. machine, (he having ordered a lot of Langstroth frames with it) and then learned to our sorrow that he had more Am. frames than any other, and that he surely supposed we would know what was wanted, from his having sent the former letter of inquiry. *Please tell exactly what is wanted when you make the order*, and during the busy season if you could put the order with all particulars regarding it in a separate place from the rest of your letter, 'twould be *such* a favor to us, when we are anxious to accomodate you all, as well, and as *quickly* as we can.

We have frequently had orders for frames that obliged us to delay them until we could await an answer to tell us what *kind* of frames were wanted.

A. I. ROOT & Co.:—Standard extractor rec'd all right. Ought there not to be some wire cloth used with it to strain the honey? If so, send me a piece suitable for that purpose. The extractor is a "clipper," our "Black eyed Baby" nine months old can turn it with ease—*fact!* It beats anything of the kind I ever saw. It *almost* goes itself and I don't know but that it will *quite* after I "grease" it. With many thanks, and kind wishes, I am, S. F. NEWMAN.
Norwalk, O. June 10th, 1874.

We have tried wire cloth fixed in the bottom of ext'r for a strainer, but have never found any thing so simple and efficient, as the arrangement described in Vol. 1, pages 13 and 41, viz.: a little bag made of cheese cloth, to hang in the bung hole of the barrel, the same being supported by a ring of wire sewed in top.

FRIEND NOVICE;—Bees are doing well here now, the extractor works to a charm, have taken from 9 colonies as follows:

June 4th,	40 lbs.
" 6th	44 "
" 10th	166 "
" 15th	102 "
	352 "

Bees are doing pretty well but the weather is most too cool for good yield of honey. Have not increased any and shall not until after the Linn. This was all taken by actual weight, not guess work.
Wirt C. H. W. Va. June 17th. E. W. HALE.

Where one has first-class white oak barrels is it really necessary to wax them? J. P. SWARTHOUT.
Dresden, N. Y.

Certainly not, if they don't leak, but we have never found any that would bear transportation without leaking enough to more than pay the expense of waxing.

◆

PROBLEM NO. 23.

IF we put an empty comb into a strong colony allowing it to remain from one to three days—not longer—it will contain eggs only. Now if these eggs be put into a Queenless colony, of course they will stand a good chance of rearing Queens from larvæ that were designed for that purpose from the time the egg hatches, and accordingly, we never get a Queen in a shorter time than 16 days from the time the comb was inserted in the first colony.

If the Queenless stocks were given a comb containing larvæ of all ages, we frequently get a Queen in ten days. Now the point is, are the former any longer lived, or any more prolific than the latter? We particularly desire facts from experience, from those who have no pet theory to defend in the matter. The oft repeated arguments, that "it stands to reason" or that "'tis contrary to nature" etc. etc., cannot be accepted as proof. Tell us what you have seen. and done.

HONEY JARS.

Best crystal flint glass honey jars.

2 lb., per gross	$9.50
Corks to fit (1½ inch)	.65
Tin-foil, per lb,	.55
Fancy labels in two colors with cut of hive, gummed and cut, per gross,	.60
" thousand	3.50

7tf L. B. HOGUE, Loydsville, Belmont Co. O.

QUINBY'S NEW SMOKER.

ALL who expect to manage bees successfully. will want the best method yet devised of using smoke. By putting old rags, rotten wood, or other material in a tin cylinder, and working a small bellows with one hand, smoke can be directed to any point, in quantities to suit. Price $1.50. Sent by mail in two parts $1.75. Send for circular and price list. 7tf
M. QUINBY, St. Johnsville, Montgomery Co. N. Y.

THE BEE WORLD.

OUR Bee Journal of the Southern States. Issued monthly at $2.00 per year. Sample copies free.
Address A. F. MOON & Co. Rome, Georgia.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY.

Vol. II. JULY 1, 1874. No. VII

HOW TO CONDUCT AN APIARY.

No. 7.

WE fear we shall be obliged this month, to let the fortunate ones, who have none but full colonies and are doubtless busy with their surplus honey, run the machinery their own way, while we consider the wants and needs of the unfortunates like ourselves, who are building up again from a few mere remnants.

When all the spare combs can be put under the supervision of the bees, by June 1st, but little or no apprehension need be felt of the depredations of the moth miller; but when 1000 combs or more must be kept safely through the warm weather, or until needed, it may be a serious matter as to how best to do it. A little knowledge of the habits of the moth at such a time may enable us to save much needless time and manipulation. We believe it has been well demonstrated that freezing, entirely destroys the moth, worms and eggs, and accordingly hives that have been destitute of bees ever since freezing weather, if kept perfectly closed, that the moth may deposit no fresh eggs, may be considered safe. It should be remembered however that they will in the summer months, deposit eggs around the cracks, etc., the larvæ when hatched from these make their way inside, soon change into the cocoon, thence into a moth, and when once a laying moth is inside a hive of combs, destruction follows very quickly. On page 27 Vol. 1, we are informed by a subscriber that, "combs hung in the open air, that is, not in a hive, at a distance of 1 or 1½ inches apart, are almost secure from their depredations"

This although seemingly strange has proved to be the case in at least two instances, and even when combs are left in the hive, if they are spread so as to be at least an inch apart, they are seldom troubled by the moth.

Although little danger may be apprehended from chilling brood during this month, by spreading too much, yet where the unsealed brood is thus pushed out-side the cluster, the effect is bad and wasteful; when you have a hive *full* of bees there seems to be little danger, and if 'tis a possible thing all hives should be full before commencing any kind of artificial swarming or Queen rearing.

A single story hive for instance if full of bees, could spare a frame of brood once a week without feeling it. If we have a dozen hives or more, that will do the same, we may expect to be able to produce at least two new colonies every week. When these new ones are also able to spare a comb with the rest, we shall have colonies accumulating at the rate of 3 a week, then 4, and when our number gets up to 25 or 30 one new one per day. This plan will soon re-stock an Apiary, and it has the advantage of not reducing any hive so long as all are kept rearing brood. Later in the season we would give the new colony 6 or 8 combs, and then they will be sure to be all right no matter when the season closes. We once increased from 11 colonies to 48 in this manner, and wintered the whole without loss.

Notwithstanding all we have said about grass and weeds in front of the hive during the working season, we rarely visit an Apiary where such negligence is not the prevailing fault. We have seen a single spear of grass not more than three inches in hight, knock down half a dozen heavily laden bees in succession as they sweep laboriously toward the entrance, which they would have gained had it not been for this trifling obstacle; this occurred in a period of not more than five minutes. Now how many bees did the same blade interrupt in a whole day? Where a thicket of grass and weeds obstruct the entrance, the bees almost all of them tumble somewhere near the hives, and panting from the exertion they have made, crawl in as best they can, rejoicing with a glad hum, poor abused patient little fellows, when their home is safely reached at last. Many will say, "Oh *we* raise the hive up, above the grass etc.," but that won't do either, for in one sense it makes matters worse; those that fail to make the hive get down, and sometimes never get up. Any careful observer may see bees from their suspended hives, when very heavily laden, take wing again and again, before making the entrance. A broad board before the entrance 'tis true is a partial remedy, but such boards warp, and give a lodging place for toads spiders and bugs, underneath; if you have only the bare ground, kept clean, it is firm, solid and simple.

We would set the hive directly on a frame, made of two inch strips, a little smaller than the hive; this would raise it two inches from the ground, but we would bank sawdust up around it high enough to cover this frame, and this would help to keep down weeds.

Around the entrance to the hive for at least a yard each way, we would keep it clean with a hoe and broom, picking out each spear of grass as soon as it can possibly trip up a bee. That bees take pride in such a door yard is evident, for they may frequently be seen carrying away sticks and dead bees that lie around half a foot from the hive, and the Italians will even try to pull up grass as it makes its appearance, so great is their love of order and neatness. That it will pay in a "dollar and cent" view can be seen from the following extract from *A. B. J.* Vol. 7, page 28. It is an account of an experiment we then made with our spring scales.

"To resume the scales: twelve ounces per hour is one ounce in every five minutes, and this was readily seen while we were standing before the hive. About nine o'clock we noticed a great many bees falling short of the alighting board, which they could not crawl upon, as the hive was suspended, but had to rest until they could again take wing; but they were so heavily laden that this had often to be repeated. By tacking a piece of cloth to the edge of the hive, so as to drop on the ground, they hummed in as merrily as you please; and the scales then showed fifteen ounces an hour, or one in every four minutes. Now, what do you think about suspended hives, or hives on benches? We took the hint and made an examination, and found many of our hives, where the bees tumbled on the ground and rolled over in their attempts to crawl up the *painted* edge of the entrance to the hive. A three cornered piece of wood sawed rough, made a nice bridge for them. Mr. Langstroth's book suggests the cloth entrance, and we are sure a little aid in that direction will be amply repaid. Give the little fellows every possible facility for unloading easily and speedily, and remember that their little atom of strength is of much importance to them, and that all needless steps or flights should be saved them, as you would save your own."

WHAT I HAVE DONE.

DEAR NOVICE:—I propose to weary you with a little history of my experience with bees. In the spring of 1872, I got a box hive of Black bees; transferred into Buckeye hive (*Patent right, waste of money,* and about middle of June, took 25 lbs. comb honey. No increase of bees or further yield of honey that year. In winter of ,72 and '73 procured one other box hive, and two Buckeyes, all Black bees, having four colonies in all, about 1st Jan., 1873. My original stock in Buckeye, died out from cold—too much upward ventilation. Spring ('73) found me with two Buckeyes and one box hive, but the season was so poor that they barely made enough to live on; in fact late in the season, say about 1st of Aug. I discovered the box hive, which was the strongest in the early spring, to be entirely out of honey and having before that time procured some of your Simplicity frames and hives, I transferred from the box hive into the Simplicity, and commenced feeding, and the result exceeded my expectations; for the Queen commenced laying immediately (she had no eggs in the box hive) and before the 1st Nov. 1873, the bees had increased largely, and had stored and capped over about 25 lbs. A Coffee sugar syrup. In the meantime, I had transferred the combs from the two remaining Buckeyes into other Simplicities, and before cold weather, had them all in good condition, save one, which gave evidences of being Queenless; and it was for this hive that I ordered a dollar Queen of you last fall, which Queen I had the misfortune to lose in introducing. Winter coming on, I made a hive 48 inches long, and as wide as Simplicity is long; intending to remove the frames from small hives into this long one, and put wire cloth frames between each colony of bees, so as to secure all the heat in a body. I did so and they seemed to do well. The Queenless colony seemed the strongest in the lot, and there was no quarreling or robbing among them.

The entrances to each section, were about 16 inches apart, and I one day, after cold weather set in well, observed very few bees about the entrance to the Queenless stock, and on raising the quilt discovered the bees all gone, and on raising the quilt over the adjoining colony, I judged from the quantity of bees there, that those of the Queenless stock had united with their neighbors; so I removed the wire cloth frame, and substituted a close fitting partition. There were now two colonies left, having a wire frame between. This wire cloth did not fit tightly at the bottom, and on examination one day, I failed to find a Queen in the side that had been next the Queenless colony, and there also seemed very few bees. I conceived the idea that the Queen had died or had passed under the wire frame into the other side, as the bees were ventilating or buzzing very intently down in one corner, where I observed they were passing to and fro very readily. So, supposing they might remain quiet even if the Queen was alive, and in the other side, as I had read of such things, I removed the wire cloth frame entirely. The next morning I found a dead Queen in front of the hive, but the bees were quiet and friendly.

I did not know then, whether I was without a Queen or not, but an examination discovered one all right. But in about a week, they killed her, and so I was then in a bad fix. I had plenty of good comb, and sealed syrup, and one very strong Queenless colony. I failed to find a Queen anywhere here, and it was too cold to get one by mail, so I had to wait until I could get a weak swarm, which I finally did in Jan. last; and in a few days united them with my large colony, and they have been doing very well so far. They are Hybrids, and I have them still in my large hive, single story, and have 22 frames in, with brood on 15 of them; and on the 3rd inst. I extracted 51½ lbs. of black Locust and Clover honey; having extracted six lbs. earlier in the season.

They are now storing again rapidly, and the Queen is doing her duty, having been badly crowded, before I extracted. I had my tinner make an extractor by directions in GLEANINGS at a cost of $7.50, and it works admirably. I extracted 18 frames, and did not receive a sting. I wear a veil, but never use a smoker of any kind. My hive is low down and has saw-dust in front, and a step or alighting board. I intend dividing when I receive my Queen.

Having now conducted you over the ground I have traveled in Bee-Keeping for a little over two years, I am prepared to believe you are weary and will close by wishing you better "luck" than you had last winter. What Novice has done, he can do again, I am well assured, and believe your disasters of the past, will only serve as guide boards in the future.

Yours truly, J. H. CRIDDLE.

Nashville, June 5th, 1874.

We are *not* weary friend C., but on the contrary tender our thanks, and request full particulars of the future working of your mammoth hive. Our experience with wire cloth for division boards has been quite similar, viz., that they sooner or later get together and you have *one* colony instead of more.

WATER FOR BEES.

"THEY are robbing the Quinby hive, now," Mrs. N. had said to Novice who was suffering from a "tormented headache," to use his own expression, one pleasant Sunday afternoon in May. He had often boasted *he* didn't have headaches, and seemed, so the women folks say, to regard the matter as a kind of feminine weakness that one should be ashamed of, but now he was making more of a row about it than a whole dozen of the weaker sex, and more than all some neighboring Black bees had just discovered that a quantity of combs of nicely sealed sugar syrup were but poorly guarded by a few miserably weak Italian stocks. Under the circumstances Mrs. N. and Master Ernest had been directed to close the entrances of such hives as failed to make a successful resistance, by banking the saw-dust up in front. They soon reported that the robbers were going out and in under the cover of the Quinby hive, it having warped enough to allow this. In this dilemma Novice was again consulted, and was obliged to cease rolling and tumbling on the bed where he lay, long enough to direct that stove wood be piled on the cover until the cracks were closed. This was done, and Mrs. N. for additional security placed on the centre of the top of the hive a large stone jar, inverted.

When Novice awoke next morning at about his usual hour—5 o'clock—although a little sadder, and perhaps wiser than usual, his head was free from pain, and he of course repaired at once to the Apiary, the scene of yesterday's troubles and turmoils.

A refreshing shower, that had been much needed had materially changed the aspect of things, and as the locust blossoms had opened during the night, all robbing had ceased and every thing was lovely.

On turning his eyes toward the Quinby hive which stood under the shade of a dwarf pear tree, he beheld a perfect circle of bees for all the world like beads strung on a string, greedily sipping the rain water from the concave bottom of that inverted stone jar. It was raised up so they could find it readily, was clean, and so shallow it could not drown them, and altogether seemed just the thing. Later, after Blue Eyes was up the numbers had increased, and so intent were they on sipping the pure water, that she could touch them with her fingers without their scarcely noticing the interruption. Of course the supply was soon out, or would have been had we not replenished it; the concavity held about a tea-cup-ful, and Miss Maudie was commissioned to see that they did not "get out." But they did for all that, for during hot days several tea-cupfuls were needed, partly on account of evaporation, and it only remained for Novice to devise a cheap and simple mechanical arrangement to keep constantly full the shallow cavity in the bottom of that stone jar. This he did very quickly by filling a quart glass fruit jar with water; a piece of paper was laid over the mouth until it could be inverted on the stone jar, and then the paper was drawn out. Of course when the water became exhausted so as to allow a bubble of air to go up into the jar, a little more water comes down and so on. A quart of water lasts several days, and the receptacle being glass we can always see when it needs replenishing. We were amused this morning to see the usual number of bees around it, and more going and coming quickly, even though it was *raining* quite briskly. Many of the bees were quite young Italians, that it seems had become so accustomed to going to a certain spot for water, that they couldn't think of doing otherwise even though water was raining down all about them. We are well aware the principle of the above is not new, as feeders on a similar plan are in use, but the plan of supplying fresh water is new to us at least. We have in former years tried arrangements with shavings, water allowed to drip on a board, and a cloth laid over a vessel full of water, but all of them were soon abandoned because they were too much trouble, or were untidy etc., and the bees were allowed to go to distant muddy streams, to the pump etc. Is it not a fact that during the working season the workers mostly fail from worn our wings, and if this is the case should we not save them all we can by having supplies near at hand; at least water if we can do nothing further?

Our 4000 Basswood trees were planted with this end in view, that is, to give them as much forage within one fourth mile of their hives, as they usually get in an area of one and a half or two miles around their hives.

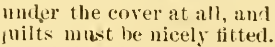
The device we have mentioned can of course be used for out door feeding, and it is perfectly secure from waste; by inverting a tumbler of syrup in a saucer, we can also use it for feeding in the hives, when there is no occasion to feed rapidly. This latter plan has been given several times in print already.

QUILTS.

JUDGING from the number of inquiries, and from the erroneous impression the writers evidently have in the matter we should judge that we had not been sufficiently explicit in regard to the manner of making, and the office of this very useful substitute for the honey-board.

The principal error seems to be the impression that they are only used during the winter and spring, whereas, with hives made with a light cover, hinged on, as we make the Simplicity, Standard, and in fact all hives ordered, a quilt is a positive necessity at *all times* of the year. If they are omitted, the bees not only get crushed under the cover when it is shut down, but they proceed at once to gum it fast with propolis, making it necessary to pry up the cover with a knife when we wish to open it, an operation that is at once fatal to the morals of both bees and owner.

The bees should never be allowed to get above the quilt under the cover at all, and to ensure this the quilts must be nicely fitted. As they are liable to shrink in time, they should be made rather large, and before the cover is closed they should be carefully tucked down all around so that not a crevice is left open, and not a particle of the quilt sticks out so as to interfere with the close shutting of the cover. Considerable complaint has been made of the bees eating through the quilts, and we have had a little trouble of that kind, but not when proper cloth was used. We visited a neighbor a few days ago who has between 40 and 50 colonies, and could but admire the nice fitting perfect quilts he used; when questioned he remarked that he had used them for two years and had never had one gnawed through in all that time. An examination showed that they were made of very coarse, hard twisted cotton sheeting. They were sewed on a sewing machine, and when done were quilted across with very long machine stitches as in the following figure.



They were filled with three thicknesses of wadding. Should these quilts be found superior to those we have before described, give the credit to Mr. E. C. Blakeslee of this place, the man of the "rail-way Apiary" plan for convenience in extracting; and by the way his uniform success in the "bee business" bids fair to place him way ahead of "us Novices."

OUR PRIMARY DEPARTMENT,

Or First Principles in Bee-Keeping.

[Designed especially for the verlest novices, and those who know nothing of bees whatever. Conducted by a fellow Novice of several years experience replete with blunders, as well as with occasional successes.]

EVERY few days, some one calls on us to know something about Bee-Keeping. Although 'tis not always the first query, it comes along very soon as to whether bees really pay in the long run. We inform them that our Apiary has always paid us a fair profit, and a few seasons a very generous one, but still like nearly all new industries, in some respects it must be considered quite uncertain. Oftentimes comes the query, "If one is going to devote their time to the business had they not better buy 40 or 50 colonies so as to have an income from them at once?" to which we reply, we should consider such a proceeding not only very unwise, but almost sure to end in failure.

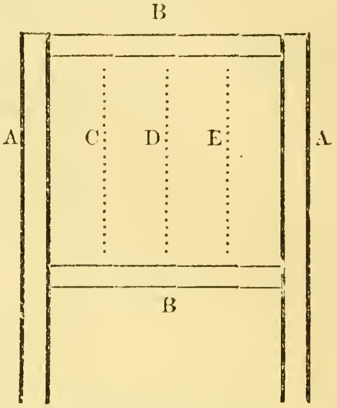
"Well, tell us just what you would advise then Mr. N. to learn as speedily as we can consistently with safety. Give us a short cut that will relieve us of the necessity of wading through long chapters of dry details, if such a thing be possible. Tell us how to act, and let us be doing something."

With all our heart, and as we *very much desire* that your undertaking be a source of pleasure as well as profit, please excuse us if we insist that you commence on a firm basis—do well what you do, do.

WHAT TO DO FIRST.

Get two posts 6 feet long and three inches square, these must be of some durable wood, white oak for instance. If you can afford the trouble and expense we really would prefer that you have them planed and painted, at any rate do not expect your Apiary ever to be any thing you may be proud of, if you push down some old sticks temporarily, one longer than the other perhaps, and both askew, for such work soon becomes unattractive and is shunned. Many visitors have admired our Apiary, and thought it no wonder we enjoyed bee-keeping in such a place, and these same persons have declared their intention of tipping their poor neglected hives of bees up square, and true, removing the weeds, starting grape vines etc., but alas! their attempts were too often but a couple of sticks picked up hastily as we have mentioned, and a few vigorous strokes in the battle with old dame nature, and then they desisted before the "coy old lady" had even had time to yield and bless her devotees with such smiles as only the successful cultivator of the soil knows she can give.

Select the site of your workshop, for such we shall expect it to be, near the house, and where it can have plenty of sun; and if convenient slanting slightly to the south. Drive these posts or stakes in the ground, so that they stand east and west and just three feet from each other, measuring from outside to outside. They are to be driven in the ground so that just four feet of them is left above, and they must stand plumb and square; if you can't make them otherwise, get a lever and strong chain and twist them until they are so. Now nail a strip of pine board 1x3 inches and 3 feet long, on the south of both, and just level with the top, from one to the other; just three feet below this nail a similar one. When the whole is square, true, and plumb, stretch three wires from one strip to the other; these are to be at equal distances from the posts, and from each other, and we would then have something like the following figure.



Let A, A, represent the posts, B, B, the 1x3 strips nailed on the south side of the posts, and C, D, E, the wires. These wires should be galvanized iron wire, about No. 16 or 17, larger would be more expensive and no better. Now we are all ready to have a fine thrifty Concord grape vine planted directly underneath the central wire D. Of course some other grape will do, but we have found none so hardy and thrifty, and that gives us the strong rapid growth that is so desirable for making a shade for our hives as soon as extreme hot weather comes on. Vines are usually planted only in the spring and fall, but we should have very much more confidence in your success if we knew you were one of those clever individuals who can plant a vine and make it grow, at *any* season of the year. You can surely do it if you have a mind to. Go to your nearest nursery man (don't ever buy of peddlers) tell him what you want, and get him to help you take up the vine, roots dirt and all, soaking the soil with water to make it stick together if need be, while you place the whole in a bushel basket for transportation. Make a large hole beneath your trellis, and lift your vine into it as carefully as you took it up, fill in with good soil, and after cutting off all the top but one shoot with three or four leaves, treat it just as you would a hill of corn that you wished to do extra well. If the operation is done in hot dry weather, it will probably need watering, and may be shading, until it gets started. We expect you in future to see that no weed or spear of grass is allowed to make its appearance within a yard at least of this grape vine. Since we have our vine planted, and ready to grow, we are now prepared to look up a hive of bees to be located on the north side of our vine, close to the trellis.

Next month we will consider the future training of this vine, as well as what to do with the Bee Hive.

If you purchase one meanwhile, select one that has lots of bees at work.

OUR OWN APIARY.

WE have only *two* losses to record since our last, and this bright morning, June 8th, everything seems to indicate we are nearly through our valley of humilation Of the two losses mentioned, one was the loss of the Queen received from Lousiana, she was stung by the bees after having been accepted at least 24 hours, the other was the swarming out as we suppose, of the Queen reared this spring in the Quinby hive; for bees and all were all gone, leaving only a small patch of brood not ready to hatch. We believe both cases point out a moral: The former, the uncertainty of any of the methods of introduction of Queens to old bees, and the latter of the folly of having a hive in the Apiary with combs of an odd size, for had not such been the case we should have strengthened them up with hatching brood as we did the rest. In regard to introducing Queens, of those sold last season, it seems that nearly half of them were reported lost in getting them into colonies. Now the plan we adopted with our imported Queen viz., giving her four combs selected from different colonies, each one containing bees just gnawing out of the cells, it seems to us is not very difficult nor troublesome, and it makes a sure thing of it, and, a good colony in very few days. In lifting the combs from the hives we brushed off every single bee, but in half an hour enough had hatched to make quite a little cluster about the Queen, and to-day (17 days later) they are working about as briskly as any colony we have. Of course some unsealed brood will be lost, but if the weather is warm, or the hive be taken in doors for the first week during cool nights, but little loss will ensue.

We have now 16 colonies and some of them are hardly yet able to repel robbers, although we have drawn on our stronger colonies for brood until *they* have become seriously weakened.

HOW THE MOTHS NEARLY GOT THE BETTER OF US.

June 17th—On the first day of June, which was a bright Monday morning, P. G., with commendable ambition, repaired to our bee house about 4 o'clock in the morning and proceeded to give it a thorough "setting to rights" which it then was sadly in need of, and so quietly did she proceed, that her task was well nigh accomplished before Novice made an appearance. In order to reduce the compass of the accumulation of combs and hives from which the bees had died, she put *twelve* combs in the hives that had contained ten, and thus reduced the number of hives that lumbered up the room. Novice when informed of these proceedings was inclined to remonstrate, but being rushed with other duties, and thinking all the combs had been frozen since the bees died, and that our house was tight enough to keep out the millers etc., we actually let the matter rest without looking at those 12 comb hives until last evening. It is true we carefully looked over a part of the hives that were left closed on their summer stands, removing the combs that became infested, and after picking out the webs and worms as well as we could, placing the comb in the centre of a colony of bees. 'Twas really amusing to see the Italians dig out any worms we had overlooked and the promptitude with which two of them if need be, would take a big worm and carry him to "furrin parts." After spreading the combs until each hive contained only seven or eight, without quilts, we had but little trouble. Well, after we had gone over those out doors on the evening of the 16th, as it was nearly dark, we proposed making an inspection of the *twelve* comb hives. The first comb would hardly come out, 'twas webbed fast to its neighbor; the next hive was about the same. After a hurried consultation the job was, at his request, turned over to Novice and although 'twas nearly 8 o'clock and raining, he proceeded as follows: As no brimstone had been used in our Apiary for some years, he first repaired with umbrella to the drug store, next the hives were lifted down and the shelves were turned up edgewise so that they would hold a row of combs the length of the building. The combs were placed about one inch apart, no attention being paid to webs or worms; as the shelves would not quite hold all, thus, a few were spread in the hives and left on the floor. Mrs. N's largest kettle was borrowed, and half filled with glowing coals, it was placed over another to prevent its burning the bee house floor; both were placed so near the door, that when all was ready a whole pound of brimstone was dropped in the kettle of coals and the door closed hastily—the upper ventilator had been stopped by a roll of quilts, and all was tight. The work of death proceeded, and although 'twas half past ten, Novice stood with his nose flattened against the window in the door, until plump eleven o,clock, then he repaired to his rest, but instead of sleeping the sleep of the just, he dreamed alternately that the Apiary was burning up, and of great worms a foot long or less that defied both fire and brimstone, and not only refused to die but "chawed" voraciously at nice strait worker comb, and when that was all gone actually commenced chewing up the metal corners too.

Five o'clock in the morning—Anxiously Novice wends his steps bee-house-ward; raises a comb from a hive on the floor; *as sure as you are alive* there the worms are, alive and well. He closes the door in despair, takes a turn in the rain but finally goes back and looks at the string of suspended combs. Ah! *They are dead*, dead as door nails—all dead except those in the hives on the floor. Of course the rest were hung up high in a string. and whilst the room is undergoing a second fumigation, Novice was promptly on hand at business as usual, and is now "deep" in GLEANINGS.

June 25th—We have now got the moth worms under complete subjection, but very few having been found after the second fumigation of the beehouse, and these were where they were completely covered up, in a mass of webs; strange to us, this mass of webs seems to enable them to withstand, in some cases, the sulphur fumes for several hours.

Our first attempt at rearing queens from our imported mother, gave us eight queen cells, and we have, strangely enough, succeeded in getting eight fine queens from them, by the plan given on another page. Although the queens are not yet fertile, we are giving their nuclei a comb of eggs, as fast as they can use them; "we" are now 24 pretty fair *little* colonies.

Gleanings in Bee Culture,
Published Monthly,
A. I. ROOT & CO.,
EDITORS AND PROPRIETORS
MEDINA, OHIO.
Terms: 75c. Per Annum.
For Club Rates see Last Page.
MEDINA, JULY 1, 1874.

ROLL of Honor, is so large, 'twas crowded out entirely.

MISS ANNA SAUNDERS, and W. J. Standefer, have more orders for Queens than they can fill.

THE yield of honey is reported good in some places, poor in others, and extra good in a few localities.

MR. L. B. HOGUE sends us a sample of a new honey jar. It is of flint glass, very neat, and the price is very low.

WE are happy to state that Mr. E. Kretchmer whose advertisement appears in this number, has abandoned the "right" business. His prices for implements are quite reasonable.

BY a series of fortuitous events we find to-day, 26th, three more of our hives well populated, one of these densely, and we are now 27. Will tell how we hive natural swarms next month.

E. C. BLAKESLEE who advertises in this number, rears from an imported Queen that came with our own, and is in every respect her equal. We cheerfully recommend Mr. B. as being prompt and reliable.

WE are pained to learn that Dr. Hamlin of Edgefield Junction, Tenn., died on the 24th of May. The Dr., has been one of our veterans in Bee Culture, has been especially active in rearing and disseminating the Italians, and has for many years controlled a large Apiary.

◆

WE hold ourselves at all times, responsible for the prompt appearance of GLEANINGS at the beginning of each month, but not for any of the Journals with which we club. We guarnatee that their respective publishers receive the money, and correct address, and after that all responsibility on our part ceases.

◆

IN mentioning last month, the comb baskets offered by Kruschke Bro's, Berlin, Wis., we omitted to give residence. A sample of the Rape seed, they advertise, sent us, proves it to be quite unlike our own. Their little book on Rape Culture etc., is now mailed on receipt of a stamp.

◆

THE Basswood Orchard has recovered from the effects of the "Grasshopper siege" of last summer, and the trees are now waving their thousands of bright green leaves, in a way that seems to say "we're good for barrels of honey if you'll only wait patiently a few years."

◆

OUR June No. was badly printed, some Nos. very, and we will with pleasure send a better one on being notified. *The Bee World* discovered our vulnerable point, and very properly remarked that bad print was as bad, as bad grammar. That's right, if Novices can't keep the "rolls" in order it's their business to get some one that can teach them how.

THE Standard Hive works excellently, and we are inclined to think comb building goes on with *better* economy than where the entrance allows a passage of air directly between all the combs. It is possible the same may be said of brood rearing also. 'Tis true the L. frame may be worked in a long hive the same way, but their length makes them much more inconvenient to handle.

◆

WE are so unfortunate as to have no colonies that have as yet required any subduing to speak of, but yet we have given the wormwood spoken of in our last number, a trial. It will without doubt, at once quell a colony, that might threaten to disregard the smoke of rotten wood alone, and it is very easily used, for we have only to sprinkle the leaves of the dried herb on the coals in our sauce pan smoker.

◆

THE *Bee World*, for June made its appearance promptly a little after the first of the month, and we are happy to add with an appearance indicative of much care in its general "*get up*". We hope it may receive a liberal support so long as it is kept equal to the number in question.

Terms, $2.00 per year. We can furnish it with GLEANINGS, for $2.25 or to our present subscribers for $1.50.

◆

WE will send eggs and larvæ by mail, from our queen just imported from Italy, for 25c. Those situated so near by, that they can get them the same day they are mailed, will probably rear queens from them. When they are to go a greater distance, we can almost guarantee them to be useless. A great number of experiments were made last season, but they were entire failures, except when they were only sent to adjoining, or neighboring counties. We will send the eggs promptly, but can be responsible no farther for the success of the experiment.

◆

WE omitted to mention that the glass jar for giving bees water, should be supported by three bits of glass placed under its mouth, when inverted, or the water will not present surface enough to give a large number of bees a chance.

Also, under the head of quilts, we should have stated that the space above the frames in the Simplicity two story hives, was necessarily made shallow, to avoid having too great a space between the upper and lower combs, when the hive was used two story. With the Standard hive, nothing prevents having all the depth required for tucking down the quilt with facility. We therefore make the rabbet 1¼ by ⅜ which, after putting in the metal rabbet, leaves a space between the top of the frames and the upper edge of the hive of about ¾ of an inch, which is about right to hold a good thick warm quilt, or a straw mat if preferred, for wintering.

◆

WE find upon actual trial, that Quinby's New Smoker has many qualities that we have not given it credit for heretofore. It is very light and very neat, and perhaps the most ingenious part of it is, that if stood on end, it will burn for an hour, or more if need be, but will go out at once when laid on its side. It will also drive bees any where we wish, with an ease and speed, and with an extremely small amount of smoke that was an agreeable surprise on first using it. We should be very glad to stop here, and not mention that it all came to pieces before we had used it an hour, in consequence of its having been put together with soft solder, but such is the fact. We wrote to Mr. Q. at once, and he will doubtless see that they are properly made hereafter. When ours got cold we managed to fasten it without the solder, and it is now certainly a most convenient implement in the Apiary.

The bellows part of it is exceedingly well made and very light and neat, and as the combination is entirely Mr. Q's invention we hereby protest against its being copied by others without his consent. With this smoker, the difficulties of opening the Quinby hive would be very much lessened.

DEPOSITORY OF BLASTED HOPES,

Or Letters From those who have made Bee Culture a Failure.

SPEAKING of bees etc.—I got my Extractor after swarming time last year. Had suffered by too much swarming, nevertheless pitched in with it, and took about 400 lbs. honey, leaving however, eight out of twenty hives for cap honey, and realized *nothing* from them. I was taken violently sick the last of August, and was unable to do anything more, until tobacco, corn, and seeding wheat were on hand demanding my whole attention, contenting myself in looking at my bees working industriously on buckwheat, taking for granted that they were doing well. In Dec. I examined my hives and found but little honey, no pollen, and bees greatly reduced in number. Fed them freely with a mixture of *rye flour sugar and honey*, (some weak hives had been fed before with tea-kettle feeder). Young bees were soon found in comb. but alas! the ice spell in Jan. swept off a number of hives, and the next cold snap, some more. Human like, Novice had to bear the blame, (extracting) but when I examined the hives unextracted, found that in proportion (most of these my best) they had lost more in number, so Novice and Extractor had to be cleared of the charge.

Conclusion—want of bee bread and inattention on my part in time, reduced the numbers of the bees so that they could not keep up a sufficient heat in ice spell. Food, though scarce in the combs, was in abundance on top of the frames, immediately over the cluster and was used freely by the bees until the ice spell closed their labors. Bees died in solid cluster on the combs just under the feed. Hives wintered on summer stands. Several weak stands have united and with same feed are now safe.

THE DOLLARS VIEW.

Interest and labor on 12 stands $10. each, ext'd	$15.00
400 lbs. honey at 12½ cts	.50.00
Gain by Extractor	$35.00
Interest and labor lost on 8 hives for box honey	10.00
Clear gain by Extractor	$45.00
Or if all had been extracted, and yielding at the same rate, then, 660 lbs. at 12½ cts	$82.50
Interest, labor etc	.22.50
Gain by using Extractor with 20 colonies bees, one season	$60.00

Red Hill, Va. J. B. TOWNLEY.

FRIEND NOVICE—In relation to bee matters I am in the same boat with yourself. I set out 26 swarms in March, 22 of them were strong and healthy. I now have SIX swarms, and two of these are weak, and one has an old Queen not very prolific. I had two Italian swarms, both dwindled down to a mere shadow, and only one Queen was saved. She is on duty now.

To say that I was blue would convey but a faint idea. I was however soon cheered up by learning from a neighboring bee-keeper who had 100 swarms in common box hives, that he had lost 25 and they were still going it, at last accounts full half of the 100 had "pegged out." My own and this gentleman's 100, were wintered in the cellar.

Now I have come to this conclusion; that bee-keeping is one of the most uncertain pursuits a person can engage in. It is nothing to winter a swarm of bees, but from March until flowers come, there's the rub; especially when we have snow until the 3rd of May. Had I not set out with the determination to succeed I would throw up the pursuit in disgust. But I will wait a little longer and see if the good time won't come sometime.

It is the old established custom in this neighborhood to set out maples for shade. I have done a wonderfully foolish thing to some minds—have planted the roadside the whole length of our farm, 116 rods, to Basswood. We shall never give up until we see bees gathering nectar from our "Linden Avenue."

By the way is Mr. Bolin entitled to a great deal of credit for wintering, or I should say, springing his 100 colonies. I know of bee-keepers with little or no experience who have lost none this past spring.

There are so many varying circumstances may not Mr. Bolin yet find his "Waterloo?" J. H. MARTIN.

Hartford, N. Y. June 6th, 1874.

There, friend Bolin, what do you think of that? 'Twas no fault of your's that your bees didn't die, it only "just happened so," and maybe you'll "ketch it" next time. We should feel more inclined to console ourselves in this manner however, were it not that others had lost bees in friends B's neighborhood, all around about him, during both the past winters. Let us see if he can do it again next winter. Friend M. is right too, for we have seen many instances of bees wintering nicely where no care was taken at all, and circumstances seemed decidedly unfavorable.

FRIEND NOVICE:—I have just been perusing the GLEANINGS, and there is something very remarkable in all this; you and I have had *exactly the same experience* in spring management.

Our bees have dwindled down precisely in the same manner. Some of our most populous hives, when set out, are now *non est*. We had two Italian Queens, one got lost, the other, in a very strong stock in early spring, escaped destruction by the "skin of her teeth." I will not venture to put her in a strong colony, so she lays about a dozen eggs in each cell. I first thought something was wrong with her, but find that all she desires is "elbow room." Out of 58 colonies—same number as yours—we have now twenty nine; three are yet Queenless, and one has a young Queen just laying.

In regard to our neighbors, they were just like yours. Those that call eggs "nits" and swarms "young bees" seem to have lost none; and open their eyes wide when I tell them of my loss. I presume they go off thinking, "well, them don't know much about bees, I'll bet a chaw terbaccer." I guess the reason our bees die, is, that they are civilized and refined and consequently can't stand such treatment from the Weather King. Yours in sympathy,

Berlin, Wis. June 8th 1874. J. D. KRUSCHKE.

P. S.—I think in a few days I can get some to work in boxes if the weather keeps favorable.

We too, are satisfied now, that the fault was no fault of our Queens; for all they seem to need, is bees. Even now (June 19th) they persist in going over their ground the second or third time i. e. putting two or more eggs in a cell.

Reports Encouraging.

THE Queen I received from you last fall is all right so far, but too early to say much about her purity.

The 8th of June last, I bought three stocks of bees in box hives, transferred in about ten days and received from them during the season 670 lbs. of nice honey, and doubled my colonies. They are alive and strong at the present time. I think that is not so bad considering the somewhat poor season of 1873.

Port Sanilac, April 27th, 1874. Wm. SPEDDING.

DEAR NOVICE:—My bees are getting me into trouble, they are making too much honey; they are filling every comb in their hives so there is hardly any room for brood. I have been taking frames out, but they fill the new combs as fast as they build them.

Retreat, Ind. June 8th, 1874. JOHN BAXTER.

FRIEND NOVICE:—We are now in the hight of honey harvest, the fields are snowy white with clover and the bees are almost breaking their little necks carrying in honey. I have a good time with my knife you sent me, and my extractor. I have four of my Blacks Italianized, got two more to Italianize to-morrow. I extracted from two colonies of Italians yesterday 3½ gallons of honey. Made three new swarms, pure Italians. I am using a 30 inch hive, frames 16½ x 10 deep; don't want anything better for the working season, and they are just right to winter two colonies in by using a division board. I think I will reach six hundred lbs. honey this season. I have sold some extracted honey at 30c. per lb., how will that do for fruit blossom honey? N. W. Kershaw, Hope, Ohio.

P.S.—Will honey extracted before the bees commence capping it over, sour if it is kept in a cool dry place?

It is liable to, if extracted when very thin, and it becomes very unpleasant even if kept where it does not sour. Be very careful not to spoil your reputation by sending out raw unripened honey.

I slung out a barrel of honey yesterday, and intended to do the same to-day but got sick from working too hard. Weather was extremely hot and help is scarce.

THEOD. M. MOLTZ, West Fairview, Pa.

Is not your Apiary so arranged that you work at a disadvantage friend M? A barrel, should not be a fatiguing day's work.

QUEEN REARING.

No. 2.

'TIS vexatious to have a fine lot of Queen cells built, capped over and just ready to hatch, and then have the greater part torn down. We are glad to be able to state that there *is* a way of making all such losses out of the question, especially when you are building up an apiary as we are now. We gave this plan partially two years ago, in *A. B. J.*, page 15, Vol. 8. It is as follows: Make a Queenless colony by any method you choose, then supply them with eggs only, or eggs and brood both as you prefer, from your choicest Queen; there should be bees enough, mostly young, to cover ten combs. Just before the Queen cells are ready to hatch, cut them out, and put them back so that you have one in each comb; or what is better, go to your other hives and select combs containing young bees just hatching, or gnawing out of their cells—be sure you see on each comb, bees just biting through—and insert a cell in each of these. Of course you shook or brushed every bee from these combs before inserting the cell; now place them all in the hive where the cells were reared, and leave them long enough to have them well covered with bees, and the cells properly fastened, if convenient. Should you get 15 or 20 cells, a double width or Standard hive will be found quite convenient. Of course none of the Queens must be allowed to hatch in this mammoth hive of combs of brood, but each comb with cell and adhering bees is to be taken up quietly and carried to a new hive on a new stand. This operation should be performed toward evening, when the bees are all at home. These combs with cell etc., in the new hive, if they contain plenty of bees and brood will generally care for the Queen without trouble, but to make a *sure* thing of it we would give a *second* comb of hatching bees to each one; this will make them strong nuclei, able to repel robbers, or to take care of what eggs or unsealed larvæ their combs may contain. Put the two combs up to one side of the hive with the Queen cell between them, and if you have them, an empty comb or two with them will be all the better. Tuck the quilt around them carefully, for they are "homeless orphans" until their Queen hatches, and fasten them in for one or two days. This last is not always necessary but if robbers are about, it prevents the necessity of close watching, and will induce many bees to remain that might otherwise go home. Build them up as mentioned last month.

See that every colony is supplied with eggs *at least once in three days*, whenever any thing may occur to prevent their having a laying Queen. With a colony rearing Queen cells, it will be of great advantage, as it keeps the young bees all constantly employed, and after their Queen is hatched, and until she begins to lay (a period of from 8 to 12 days with us), it is of the greatest importance not only in permitting the colony to go on briskly, but in inducing the young Queen to make an early flight. You can get eggs now, by putting an empty comb in a strong colony over night, and if you have nicely fitting hives and frames, you can put them in where needed almost as quickly as we can tell it. If you are going to be an Apiarist there should be no excuse for *neglecting* little matters like this.

Humbugs and Swindles
Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

MR. T. H. B. WOODY, Manchester, Mo. was complained of, some time ago, and we wrote him, asking if he could give us any explanation of the matter. He replied at length, stating he had faithfully filled all orders with the exception of one, the writer of which had failed to give his address, and that he would be pleased to learn where he should send the money or Queens. This might have explained a part of the matter, and had he not before closing, called on God to witness the purity of all his motives and intentions, we might have thought him upright and honorable. We then wrote our friend Klum, of Sherman, Texas, that Mr. Woody had lost his address; friend K. considered this too big a joke altogether, and forwarded us a mass of letters of apology, excuses, and attempts to lay the blame on other people, that it seems to us it would have been worth full $12.00, the amount in question, to write. He first blames G. H. Boughton, (see Dec. Swindles of last year) for having cheated him out of a larger amount, as if that excused *him* at all; and finally says he will return the money by post office order if friend K. will *take the risk* of having it sent thus. Afterward wants to know if he won't "take pigs," money is so *hard to get;* it may be hard to get in Texas too, for that matter. At all events our subscriber had been writing nearly two years in vain, in the attempt to get back his $12.00 or the Queens, and yet Mr. T. H. B., "didn't know his address."

A large number of persons are now soliciting orders for Queens, Bee-keeper's supplies etc. etc., and just as soon as it is known that one of them refuses to refund the money sent him, or to send the goods ordered, we hope our friends will give us their names without hesitation. Before making any transaction public, we will give them ample time to clear themselves if they can.

Queens reared on Kelley's Island are again advertised in such glowing terms, as the "Italy of America etc.," and the prices asked for them are enough to do all they propose honorably, but the gentlemen should be informed that if no Queens are reared at all on the Island, as was the case last year, they may expect to have our Bee-keepers fully informed in the matter. Several letters are now on hand regarding their traffic.

Heads of Grain,
FROM DIFFERENT FIELDS.

MESSRS A. I. ROOT & Co.—In March we had a fine flow of honey, but I being a beginner had weak stocks and did not reap full benefit, but it was of great service in building up and we had much nice honey. I raised Queens in March and was careful to put no comb in except pure Italian, but to my surprise I found three Black Queens, or nearly so, and I have not yet seen any workers from them with yellow bands. All other Queens raised then and since, are bright. I live on Vermillion River out of reach of over flow. Dryest ground is right on bank. How far off would you put an Apiary? How far off will it be safe to keep *black drones?* will soon have none and no neighbor within half mile. When and how can I move bees 100 yards safely? J. B. RAMSEY M. D.

Abbeville, Vermillion, La.

We are inclined to think the Queens mentioned came from common brood by some means.

We are too little acquainted with the South to be able to advise intelligently as to locating an Apiary, but would remark generally, that we would choose the lowest ground we could find, that was not too wet to be in danger of drowning the bees; our reasons are that they might be sheltered from high winds; if surrounded by hills, rocks or tall forests, all the better; secondly, we would have the bees descend, when going home laden. On going home before a storm and perhaps wearied, they would sail down into the quieter valley almost by gravity alone, whereas were their home on a "hill top," the hardest part of the battle would be to ascend in the face of the blast, when laden with pollen and possibly honey too, besides the fatigue usually resulting after a day of labor. We should pay but little attention to proximity of water, for this can be easily secured artificially.

Bees are reported to go home, even after having been removed as far as 2 miles; careful observation however is needed to be aware of this; but we think drones should be kept two miles away, or more if possible.

We know of no way of moving a colony of working bees during the working season, 100 yards, without loss. We have made careful experiments in the matter, have smoked, and drummed, and clustered them with their Queen apart from their combs, yet go home they would a great part of them, in spite of us.

Thoughtless people may claim there is no loss, but if they put a similar hive on the original spot, they can easily determine how many are lost; if no such hive is used, they scatter about in a way that would likely be unnoticed, but careful inspection of the shrubbery, grass, etc., at night or early in the morning, will generally reveal the homeless wanderers. Moving them one foot a day is the safest plan we know, but 'tis a great bother, and after all a considerable damage to their labors.

If any one can direct us in a better way, 'twill be a favor. Of course by confining the bees to the hive, or after a spell of bad weather of a week or more, they can be moved without *much loss*, but careful observation shows that even then, the older bees are many of them missing, and in some cases the loss is considerable. We once purchased a colony of a neighbor in January; they had no weather enabling them to fly freely until March, but even then so many bees went back that they froze outright, the first cold night; and examination showed a great part of them scattered about on the ground at their old home. That such is not always the case we are well aware, but it should be borne in mind that such results may frequently be expected.

I put 50 colonies in cellar last fall, in Langstroth hives—uneasy all winter—thermometer between 35° and 50°. Two died with dysentery—more had it—have united until I have 40 left. Bound to have all strong if have to do so some more. Some had brood in ten combs—will average about eight. Cold bad spring.

Adams, Wis. May 30th. 1874. J. L. WOLFENDEN.

Have just examined the stock of black bees, transferred from "big hive" and find that the Queen has laid more eggs than any two Italian Queens in the Apiary, since I transferred them. Think Adair is quite right on the dwarfing hive system.

Dowagiac, Mich. May 15th, 1874. JAMES HEDDON.

Mr H. sent us an account of transferring a colony of blacks, from an extra large box hive, so large in fact that it was never filled with comb, but it contained an unusual number of bees. The letter has "got away" somehow but the above is a further report from it.

I had enough Queen cells to start 4 nuclei, which I formed in about 10 days, well they hatched out, but no drones. I looked everywhere for instruction as to what would be the result. Langstroth page 36, says, "retarded impregnation of Queens results in producing drone laying Queens." Of course this would not do, and I could find nothing contrary to this in Bee Journals or GLEANINGS; in fact they did not even treat on the fact that such was the case. I have often seen the remark that it would not do to raise Queens too early, but I have never seen the reason why. Please do not think I am scolding our Editors, but you know it is best to tell our troubles sometimes. Well, Thursday last I killed two of those Queens, and one flew away. Did I do right? S. J. M.

Elyria, O.

Tell us your troubles by all means, and we'll help as far as we know.

Our Queens usually commence to lay when from ten days to two weeks old, and occasionally not until three weeks of age. A Queen now in our Apiary that has proved herself quite prolific, did not commence to lay until after she was a month old, but as a general thing we do not think it pays to keep them over three weeks. When Queens are reared in the spring before drones have made their appearance, we should most certainly keep them if any sealed drone brood could be found in the hives at the time they were hatched. There would however, be some probability of their proving only drone layers, and we should be careful to see some of their brood sealed over before deciding positively they were fertile.

VALUE OF LITTLE ATTENTIONS TO BEES.

I noticed to-day that one or two bees commenced carrying water, but it was so cold they sipped a little and then stopped. I warmed the water to see the effect and it was amusing as well as interesting to see how soon the bees found it out; in about 20 minutes there were from 40 to 50 eagerly at work. No doubt we can save bees much labor by attending to their wants. Think for instance of bees carrying off a handful of debris as fine as sawdust, a particle at a time, when the Apiarian can sweep off the whole in a moment. D..C. MILLETT.

Holmesburg, Pa. March 21st, 1874.

We carried the above in our pocket several weeks, proposing to try it before it was published. Notwithstanding we met with no decided success in feeding the *warm water* we fully approve of the general sentiment of the letter.

MESSRS A. I. ROOT & Co.—Enclosed please find 25 cts. for strip of worker bee comb, with eggs suitable for raising good Queens. Send Monday morning, 15th inst., if the weather is not too cool. E. FRANKS.

Inland, O. June 18th, 1874.

P. S.—My bees removed all the eggs but three, from the strip I got of you last year; those they raised into Queens, now mothers of good colonies.

The above comes from an adjoining County. Could we send them to all our subscribers as surely, 'twould be a grand thing indeed, but candidly, we have no hope that it can be done. Therefore, instead of sending to us, send to some one near you, who has a choice, or imported Queen.

MORE ABOUT STRAW MATS ETC.

FRIEND NOVICE:—I noticed in the last GLEANINGS some instructions for making straw mats; you have seen one of ours I believe, friend Muth having sent you one. I will try and see if I can describe our machine, which simplifies the making very much; it is simply two rows of ash rods, seven in a row, mortised in a base so the rows are about an inch apart; the rods must be thick enough to not spring, ours are ¾ of an inch square. We commence by putting a handful of straw in at the top and forcing it down between the strips to the base, and so on till filled to the required hight, being careful to reverse the ends at each handful. With two blunt needles we now sew between the strips saddler fashion, and when finished, cut the surplus and loose ends off with a sharp knife, leaving the outside rods to guide you, after which the mat is slid out of the top. With a very little practice a very neat tidy mat can be made. Any carpenter can make the frame. If this is not plain enough I will be glad to give any further information. Those of us in this neighborhood who used the mats last winter did not lose a swarm.

I see some are inquiring how close they can put their hives. I use the Langstroth, they are ranged in rows four or five feet apart at the most, and as close in the rows as I can get them. It makes them very unhandy being able to work only from back to front, but we have to economize space when we have to keep on the roof, or in a small yard; however we experience no inconvenience as far as the bees are concerned, and I don't think I lose more than the average number of Queens. I am surprised myself at so few losses in that way.

This is not a first rate year with us. I have taken out over 2000 lbs. so far and hope to get as much more, but that of course depends on the season. Several showers have brightened things up and made it more promising.

Will close by hoping Novice's bees are making rapid headway in regaining their old numbers and standing.

Cin. O. June 17th, 1874. H. E. CURRY.

I united my bees down to 51 stocks, one of which was found afterward to be Queenless, so I call it 50 to commence the season with; 25 of the best will average brood in 10 Gallup frames, or about 800 square inches of brood. The twenty five poorest, 7 frames, or 500 square inches. Am surprised to see that you do not seem willing to acknowledge that Black Queens commence to breed earlier and faster in Feb. March and April which is certainly the case, but in May and June the Italians out-strip them by nearly one half. I have had Italians that had not even an egg the 20th of April, that made the best of stocks.

Borodino, N. Y. June 10th, 1874. G. M. DOOLITTLE.

Tell me how I can get rid of the little red ants in my hives. Tell me what is the matter with the young bees, when they become uncapped and die in their cells before it is time for them to hatch, and what shall I do when I find it so? E. HUNTER.

Pour boiling water on the ants if you can, if you can't conveniently, sprinkle fine sugar in a sponge, and when full of them dip in boiling water. If we can have our hives full of bees as they should be, the ants or any thing else are perfectly welcome to go in if they can stand it.

We fear you have spread your combs too fast and thus forced some of the brood outside the cluster, which has become chilled. We have been guilty of the same thing several times this spring. Watch closely the result of your work, and go slowly.

One year ago Shaw & Son sent me an Italian Queen from which I have raised quite a number, all of which are exactly like her, they having only *one* chance out of fifty to meet pure drones, (I had forty nine half blood stocks, and one pure), yet two fifths of the young Queen's progeny are regularly marked three banded workers. I think that very good, what do you think of her?

I have no faith in raising October Queens. Went into winter with plenty drones, yet some of my young Queens came out barren or drone layers this, and last spring. Good success in wintering, lost but one stock, but any man that will keep bees in such a patent hive as that was, should lose them all. Please accept my sympathy for your loss. A. BAIR.

Rollersville, O.

DEAR NOVICE:—Supposing I should commence bee culture this spring with about 50 stocks of bees, and should extract all their honey, year after year, not allowing them to swarm at all, would not their Queens after four or five years become unfertile and my stock become depopulated; or would they rear young Queens in place of the old ones? Another thing, I would like to know, supposing some of your bees should swarm naturally, would you give them a whole New Idea Standard hive at once, or would you only give them a part at first? ILA MICHENER.

Low Banks, Canada. June 14th, 1874.

Our bees always rear a new one before the old Queen fails, and we have now two hives containing both an old and young Queen. The old Queen sometimes keeps on laying eggs for several weeks or even months after the young one has become fertile.

We would give a new swarm only as much room as they could comfortably fill, dividing off this space by a division board, or with a half of the quilt. The quilt we use on the Standard hive is long enough to cover half the frames and also to drop down and perfectly divide them from the other half. We would hive the bees in the front half near the entrance, and after their combs are well started, locate them in any part of the hive that may be deemed best. We should, as a general thing, keep the bees at the end nearest the entrance, extending them backward as the colony increased in size.

Bees seemed almost as if they had deserted their hives here in April and first of May, by the strong winds blowing them away.

Two hundred and sixty colonies of last fall (Oh! I had intended to say nothing about this), have dwindled down to fifty two Queens and about enough bees to make five good colonies.

Don't you think I will do exploits in the great Basswood forests of this region?

I have twenty four hundred Langstroth and Gallup frame combs unoccupied, which I am putting through the purifying element of purgatory. By the way I am soaking a large number of combs in a tank of water for forty eight hours, then throw the water out with the extractor and hang them in a frame work under the shade of my grove, as worms seem less likely to breed there. I find that 12 or 15 hours soaking will not kill all the moth. R. WILKIN, OSCALOOSA, IOWA

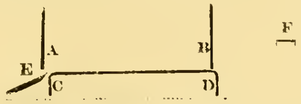
I believe raspberries ought to be cultivated more for bees, as they come ni between apple blossoms and white clover. Mrs. S. J. W. AXTELL.

Roseville. Ill.

We heartily agree with our friend Mrs. A. Those who are desirous of raising honey plants, could start an acre of raspberries with very little danger of their not being able to get their money back, even if it did not pay for the honey alone. Reports of the quality of raspberry honey all agree in pronouncing it extra fine. For directions for cultivation, see Fuller's Small Fruit Culturits which we can mail for $1.50.

I cannot understand what you mean by "doorstep," "common sense entrance." It is not described in GLEANINGS satisfactorily. You presume we have all read the *A. B. J.*, a number of as wish we had. I see you or some writer in GLEANINGS refers to your description of it as given there. Name lost.

We presumed the explanation in our circular for 1873 was sufficiently explicit, if not, we will try again.



Let A, represent the front, and B, the back of a one story Simplicity hive, and C D, the bottom board made just like the cover, as we have so often explained, and let the dotted line represent the ground. By letting the hive project as represented, we have the entrance just below A, but without the slanting board E, for a door-step, the bees would have to climb the perpendicular front of the bottom board, which is very difficult when loaded. Now with one edge of E, on the ground, and the other, which is beveled sharp, resting against the bottom board, nearly level with its upper surface, they have every facility for access. Now E, would soon slip down out of place, so we fasten it by driving a staple of galvanized wire, F, one leg into the end of E, and the other into C D, with another similar one at the opposite end of E.

We have given this illustration for the benefit of those having the Simplicity hives already in use, for the Standard hive having a permanent bottom board, has also a permanent door-step. We are perfectly satisfied *now* that the Standard has every advantage of the two story hives and as it is much less labor to extract the honey from it, we would earnestly advise all who can, to adopt it in preference, whenever an opportunity will permit, without too great an expense.

The following is taken from a letter just rec'd from Mr. Nunn, the friend we mentioned who brought our imported Queen from Italy.

Do not represent them as bright, for they are dark, and I do not wish any one disappointed. Their workers are not as bright as many we have of home reared Queens, but their disposition seems remarkably kind, some of the Queens have almost filled their hive with their own progeny.

The Queens came from Milan (Sartori's apiary) and he said were picked up in several different parts within about fifty miles of there. None of them from the South, where Dadant got most of his. I prefer bees from the North for my own use, even if they are dark. I couldn't see much difference between the bees of Milan and those on the Lakes, North. They *claim* at Milan their bees to be larger, brighter, and more prolific than those of the higher country North.

The inclosed card is of a celebrity of Milan, who knows you well through the *A. B. J.* and has translated some of your writings. He said perhaps I would have an opportunity to hand it to you. F. T. NUNN.
Oberlin, O. June 19th, 1874.

We would refer such of our friends as care to invest so much, to Mr. N's advertisement. We can assure them that whatever he states can be implicitly relied on, and we have been very agreeably surprised at finding our own Queen, fully equal in every respect to any Queen we ever owned, notwithstanding we have been so frequently told, imported Queens were inferior to home bred ones. 'Tis true she is dark, but her workers are all we could desire, and so diligent is she in her duties that she is almost invariably found depositing eggs, and unlike our other Queens she *always* continues to do so, even when the comb containing her is held up for the inspection of visitors. On one occasion when we had omitted to give her the requisite "elbow room," she went over her ground the second time putting two eggs regularly in a cell.

MESSRS NOVICE & Co.:—I desire to consult the "Wind-mill" upon a few points, which I should be thankful to have removed outside of the mist which surrounds them.

1. In hybrid stocks, we have workers some with three, some with two, some with one yellow band, and others again with long slim black bodies without any yellow band, would there be any difference in the value of Queens reared from these eggs, which if suffered to produce workers would hatch out the *four* differently marked bees as above?

In a word, would not a Queen reared from an egg which would have produced a three banded worker, be nearer pure, and every way better than a Queen reared from an egg that would have produced a single banded, or a full dark colored worker?

2. In the new style of hive, I have the broadside of one sheet of comb exposed to view through the glass in rear. I notice some of the bees rapidly running over the comb, frequently turning around and shaking their bodies most violently and a few bees following them around in their wild movements. The books tell us that these are *young* bees, (wax producers) and that they thus give notice to others, that they have a crop of wax scales ready for use. This may be so; but I notice that there are others just in from the fields, legs loaded with pollen that go through the same wild Quaker actions. Books further inform us that the wax producers eat largely of honey and remain in a quiescent state while secretion is going on. Let this suffice for the present, will consult the Wind-mill on other points some other time.

Respectfully yours, J. H. WILSON, SEN.
Lexington, Texas. May 30th, 1874.

We hardly see how one can answer the first, because we cannot tell whether an egg that we use to rear a Queen be one that would produce a Black or an Italian worker; we do know however that Queens reared from a hybrid mother, vary greatly in color, and we have had an impression that yellow Queens gave us workers with the most yellow bands. Imported Queens however, may be quite dark and yet produce beautiful workers; perhaps not so light colored, but we *do* think selecting Queens that produce very light colored bees has injured the value of the Italians as honey producers, and possibly may have (we can only conjecture) something to do with our spring losses; these bright yellow workers being shorter lived, and failing before brood is reared to replace them in the spring.

In regard to the second matter, 'tis our opinion that the movements you saw were only their expressions of rejoicing at something that pleased, such as a sudden yield of honey, an accession to their stores by robbing, feeding them, fine weather after a storm, a lot of young bees just hatched etc., etc. We have seen a whole colony set wildly rejoicing just by giving them a few clean white empty combs when they had the rest all full. We have no faith that the wax producers have any thing to do with it although we have seen such statements. When a young bee makes his first foraging trip and returns with a load of pollen, he seems anxious that all shall notice his great achievement, goes in the hive and out several times, shakes his body, runs against his fellows as if they were "no account" and often seems to induce his fellow juveniles to go forth in hot haste to see if they cannot do as well. In truth bees are as jolly, playful and happy as kittens when you once know 'em.

My bees wintered very well. I had them in an out cellar which is quite dry and cool, and lost but one in fifteen; that one being Queenless. I find in handling them that the Quinby frame as compared with the *Novice* frame is rather too long. and the full combs too heavy to handle nicely. C. E. GAYLORD.
Irving, Kansas.

The above shows that wintering in-doors is practicable as far south as Kansas, even with winters as mild as the past. Since our friend wrote the above in regard to the large frames, he has countermanded an order for smaller ones, saying:

If it would make you no trouble, I should prefer the Quinby hive for the reason that the most of mine are of that sized frame. Another season, I shall conform to whatever size of frame shall seem to become Standard among Bee-keepers.

Just the idea exactly, and hundreds of other Bee-keepers are feeling the same way.

MR A. I. ROOT—You may condense the following *facts* for Mr. Sager [see page 59] of Hudson, Ill. and others. Bees *do* work on Buckeye some seasons. I am inclined to think it is sometimes very rich; have not the *positive* proof. In cold rainy weather, backward springs, it puts out large buds before grass comes, and cattle *will* eat them, and it makes them drunk. I have known dozens of them to die from being "Buckeyed," The old woman's remedy is a pint of lard. If they get down once they are sure to try it again. No danger after warm weather and plenty of grass.
Sherman, Texas. May 26th, 1874. M. S. KLUM.

We have had no rain since the 24th of April. Yesterday evening we had some hopes, but only a light shower hardly worth having, and to-day hotter and dryer than before. The bees cannot gather a living from any source, and we shall have to feed for, we know not how long.

"How doth the little busy bee
Improve the sweltering hours,
Loafing around the 'gro-ci-ree'
Stealing both sugar and flour."

And although the police does not interfere with their operations, they do not get enough to be of any benefit to their owners.

We truly commenced Bee-Keeping in a bad season, but don't mean to give up while we have any old clothes left (we have no new ones), to trade for sugar.
New Orleans, June 1st, 1874. J. H. Y.

I think you Editors, I mean Mrs. Tupper, Clarke, King, and you, have one fault in your Bee Journals; you ought to give lessons in natural swarming, hiving, etc., because there are ten bee-keepers that use the box hive with a 20 or 30 lb. box on top, where there is one who has frame, and practices artificial swarming. I think we have too many contrary people, they won't give up the old way. I know more than a dozen who would read papers, if they could get some that would talk a little in their favor; I think you could give a piece sometimes that would encourage those box hive men.

I have seen in June No. about placing hives and about the color, I see you go in for pure white; I don't like white on account of the moth, I think they will enter a white hive before they they will go for a dark one, though perhaps that don't make any difference in your Apiary because you look through your hives pretty often, but that is not the case with all bee-keepers. I would say to those who do not look often after their bees, get dark colored hives. I have my hives under the shed with the curtain arrangement to it, and every hive of a different color. Hives not more than six inches apart and never had any trouble from their getting mixed. I have had bees over two years and have not lost a Queen, either old or young. I had over a dozen young Queens fertilized and they all came back to the right hive. My hives get the morning sun; the sun shines on the hives till about 10 o'clock, then they get shade from the roof of the shed; at about 4 o'clock the sun shines on the hives again from the west side, and that keeps them working till dark.

I have got twenty one hives and ten different kinds, which I think are *nine* too many. I think I will have one kind of hive next year, and that will be your hive. My advice to all beginners in Apiculture is to get *one kind* of movable frame hives. D. N. KERN.
Shimersville, Pa.

SHALL WE HAVE A DEPARTMENT FOR BOX HIVE BEE-KEEPERS?

There may be much truth in what you say friend K. but what can we say for the benefit of the "box hive" people? As an illustration: An acquaintance had a colony in a box hive that gave him 40 lbs. of honey last season, and as they cast no swarm, were full of bees and seemed to winter nicely. In April they began to dwindle down as ours did, and we suggested that they might be Queenless, he meanwhile thinking that the moth was the trouble, although we attempted to tell him that the moth never troubled a hive with plenty of bees; but he could not quite accept that theory, and so we finally decided to transfer them to settle the matter. This was done the last of May, and a nice Queen was found with a fair colony of bees, and considerable sealed brood; but to our astonishment this sealed brood was all eaten up by the moth. Eggs were found in great plenty all over the hive, but as soon as larvæ appeared they were devoured by these great disgusting over fed worms, until a good colony was just about discouraged. After trying in vain to pick out the worms after the colony was transferred, our friend removed their comb entirely, and gave them one comb from an empty hive, placing an empty frame between this and the side of the hive. We are happy to relate they are now building new comb, which the Queen is filling with eggs and brood, with all the energy of a new swarm. The recent troubles in winter and spring, make it more important than ever before that our combs be "get-at-able," if we may be allowed the expression. In the same neighborhood a subscriber who had between 30 and 40 colonies in box hives has lost all but two this spring. Now what shall he do with the comb in those hives? Judging from the way the moths are going for our own this summer, perhaps the best advice we could give would be to burn them all up. A new swarm put into a hive of combs where the moth had made a lodgment, would be just about thrown away, if they did not take *themselves* away.

It seems to us movable combs are a necessity, and as a proof of this we would invite attention to the fact that not one person in a dozen now keeps bees who did formerly. Those who have formerly had their box hives by the forties and fifties have now only three or four, or none at all, and every winter of late, sweeps them off at such a rate that 'tis now an easy matter to find localities for rearing Italians, with no common bees within two or three miles. Like many other industrial pursuits at the present time, success can be attained, only, by an incessant battle against disease, weather, and the depredations of the various enemies among the insect tribe. In this war for victory we are almost powerless with box hives, so much so that we cannot think it worth while to devote very much time to the matter.

When our friend gets rid of his *nine different kinds* of hives, he of course will have them all alike, that is if every frame goes nicely in any hive, and we think he will find dark colors quite objectionable in very hot weather. If he has as yet had no trouble with hives *six inches* apart, he assuredly will have when he gets to extracting, as every good bee-keeper must sooner or later.

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal for	$2.25
" The National Bee Journal "	2.25
" The Bee Keeper's Magazine "	1.75
" The Bee World "	2.25
" All four, The Bee Journals of America	5.50

Books for Bee-Keepers.

SENT postpaid on receipt of price.

Langstroth on the Hive and Honey Bee	$2.00
Quinby's Mysteries of Bee Keeping	1.50
Bee Keeper's Text Book, muslin,	.75
" " " " paper,	.40

The above are really all, that we can recommend, and they should be read with considerable allowance for being much behind the times.

Langstroth, is valuable as giving the correct Natural History of the bee; Quinby, as giving a rather more practical view of the industry, so far as dollars and cents are concerned.

King's text book, as being a condensed and alphabetically arranged summing up of the two.

Langstroth, seems to have pursued his investigations with an enthusiastic love of getting at truth alone, and Quinby, with a desire of rendering the business less uncertain in a pecuniary point of view, to the masses. While these two great writers started out, each without a knowledge of the other's work; it is greatly to the credit of both that they agree so nearly in all essential points.

Good Books.

These, though not specially designed for Bee-keepers, have a tendency to inculcate principles that ensure success in bee-keeping as well as almost all other rural pursuits.

The first on the list should be in the hands of every one who has planted grape vines to shade the hives, as we have advised.

Any of these books will be forwarded by mail, *post-paid*, on receipt of price.

Fuller's Grape Culturist	$1.50
Fuller's Small Fruit Culturist	1.50
Fuller's Strawberry Culturist	.20
Fuller's Forest Tree Culturist	1.50
Henderson's Gardening for Profit	1.50
Henderson's Practical Floriculture	1.50
Tim Bunker Papers	1.50
Ten Acres Enough	1.25
Roosevelt's Five Acres too Much	1.50

The two latter should go together, for they are in our opinion, both of them extremes, but it opposite directions. The pictures they give of rural life remind us of modern bee-keeping, for while one is doubtless a truthful delineation of "Reports Encouraging;" the other, is an equally candid recital of the experience of one who it seems was doomed to "Blasted Hopes," only because he had too much money, and too little experience.

All of the above belong to our own library and are among our most valued works.

Averill Chemical Paint.

THE *ONLY* RELIABLE.
THE *MOST* BEAUTIFUL.
THE *MOST* ECONOMICAL.
THE *MOST* DURABLE.

Requires no oil thinner or drier,
Requires no waste of time in mixing,
Has stood *eight years' criticisms*
With *yearly increased popularity*
And *yearly increased* sales.

Is sold by the gallon only, in packages of from 1 to 40 gallons each, in Purest White and any Color or Tint desired.

Address, for sample card of colors and price list,
Averill Chemical Paint Co.,
Office and Factory 132 & 134 East River Street,
CLEVELAND, OHIO.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

J. Shaw & Son, Chatham center, Medina Co., Ohio.
I. E. Daniels, Lodi, " " "
G. W. Dean, River Styx. " " "
W. J. Hosmer, Janesville, Minnesota.
Dr. J. P. H. Brown, Augusta, Georgia.
E. C. Blakeslee, Medina, O.
Willis A. Phelps " "
W. D. Wright, Knowersville, Albany Co., N. Y.
J. H. Nellis, Canajoharie, Montgomery Co, N. Y.
R. S. Becktell, New Buffalo, Mich.
C. R. Williams, Milan, Erie Co, O.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

J. H Martin, Hartford, N. Y.
Geo. T. Wheeler, Mexico, N. Y.
R. S. Becktell, New Buffalo, Mich.

In order to hasten the introduction of the ☞ STANDARD ☜

Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground	$2.00
Twenty frames for above 5¾ c. each	1.15
Sample Frame, by mail	10
Quilt	40
Or all complete except painting, for	3.50
The same in a bundle including nails, hinges etc,	3.25
Extractor made expressly for Standard frames, (Comb frame 14¼ wide, by 10 deep.)	$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

ILLUSTRATED JOURNAL A magnificently Illustrated Monthly, with **Chromo** $2.50 a year. Send **10 cts.** for sample copy, or **30 cts.** for sample Chromo, terms to agents, etc. **Canvassers Wanted,** In every town, county & State. Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

SCIENTIFIC FARMER A Richly Illustrated Monthly, $1.50 a year. **Chromo** free to annual subscribers. On trial, three months, **25 cts.** or with Chromo, **50 cts.** Sample copies and terms to agents sent on application.
Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

PLEASANT AND PROFITABLE EMPLOYMENT, for male or female, in every city of the Union. Active persons can double their small investment every day. Inclose STAMP for particulars to
THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

ITALIAN QUEENS.

THIRTEEN years experience in rearing Italian Queens. Average sale each season, 700. All Queens warranted pure, and safe arrival guaranteed. Prices very low, and price list sent free.

6tf H. ALLEY, Wenham, Mass.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,....................	$6.50
Two " " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross,............	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,..	19.00
Labels for above, " "	.65
The same with printed address, per 1000	4.25

I shall have on hand and ready for shipment from the 15th of June, a large lot of 1 and 2 pound square flint (white) glass honey jars. They are of the same style as my other jars, which are by this time well enough known.

I shall sell 1 lb. (white) flint Glass Jars per gross $8.00
2 " " " " " " 11.00

In lots of 10 gross or more, the same as the others, 50 cts. less per gross.

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

For further particulars, Address,

CHAS. F. MUTH,
1tf Cincinnati, O.

BEE-KEEPER'S SUPPLIES.

We can furnish everything needed in the Apiary, such as Italian Bees and Pure Queens, Honey Extractors, Knives, New System and Champion Hives, six styles, Bee-Feeders and Ventilators, Bee-Veils, the American Bee-Keeper's Guide, 244 pages, paper cover, 50 cts.; bound, $1.00; Wax Extractors, $3.00; Alsike Clover Seed, Black Spanish Chickens, &c. Send for our large illustrated PAMPHLET, containing information for Bee-Keepers, FREE to all. **E. KRETCHMER**, Coburgh, Mont. Co., Iowa.

IMPORTED QUEENS.

Just from Italy.

HAVE been in native stocks just long enough to have hatched a nice progeny, and to have been fully tested for prolificness.

They will be shipped by express with enough accompanying bees, so that they may be liberated on three or four combs of brood just gnawing out of the cells, and thus avoid all possibility of loss in introducing. Price $15.00 each. Order soon, as but a limited number are left. F. T. NUNN, Oberlin, O.

ITALIAN QUEENS.

From an Imported Mother.

Sent as soon as fertile, for $1.00 each. Tested, and warranted to produce three banded workers, also safe arrival guaranteed, each..............................$3.00
My Queen mother is from the Nunn importation mentioned elsewhere. E. C. BLAKESLEE, Medina, O. 7tf

DISSOLUTION AND REMOVAL.

The firm of BALDWIN BROS. is dissolved by mutual consent, the same to date from Nov. 1st. 1873.

L. W. BALDWIN,
A. A. BALDWIN,
P. BALDWIN.

The subscriber, having removed to Missouri, will continue to breed choice Italian Bees and Queens from the best stock that can be procured. Purity and safe arrival guaranteed. *No circulars.*

Prices:—Single Tested Queens, $3; Two for $5. Six or more, $2 each. Address L. W. BALDWIN,
Wellsville, Montgomery Co., Mo.

DO **TRY IT 3 Months for 10 Cents;** or with $3 Chromo for 50 cents; or 6 months with "The Flowers of Paradise," a first-class $6 Chromo, 15½x21 inches, for $1. The National Agriculturist and Bee Journal is a 16-page paper of 64 columns, handsomely illustrated in all its departments. One of the best *Agricultural* and *Family* papers published. Only $1 per year, or $1.25 with best Bee-Book, or **$1.50** with a beautiful Chromo. Bee-Keeper's Magazine, a 32-page monthly, same terms, or both for **$1.75**. Send now for samples, and **Liberal Terms to Agents free.** H. A. KING & Co., 14 Murray St., N. Y. 1w2

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

TESTED ITALIAN QUEENS—Sent by mail $3.00 each.

Nucleus Hives, untested Queen, bees and all sent by express for $3.00. Queens bred from pure mothers warranted fertile, with no other guarantee, sent by mail $1.00.

Orders will be filled strictly in rotation.

Address J. SHAW & SON, Chatham Center,
3tf or I. E. DANIELS, Lodi, Medina Co., O.

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to NATIONAL BEE JOURNAL, now published and edited by
ELLEN S. TUPPER, Des Moines, Iowa.
Liberal terms to Agents. Specimen number free.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address
DR. J. P. H. BROWN, Augusta, Ga.

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular. Wm. W. CARY,
1tf Colerain, Franklin Co., Mass.

WE can furnish Summer Rape seed, American grown, per pound..............................20
The same, Imported..............................25
Above includes postage. If sent by Express 8c. less.
A. I. ROOT & CO. Medina, Ohio.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " " Five " " " " " 75 " "
" " " Ten " " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume 1, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,
BY A. I. ROOT & CO.
Vol. II   August, 1874.   No. 8

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee-Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

Bee World. *A. F. Moon & Co.*

[*Also Bound Volumes of the former since* 1860, *and Files of all other Bee Journals that have been Published in America.*]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

◆

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to conduct an Apiary........85
How large shall we make our hives?........85
Care of honey after extracting........86
Waxing barrels........86
Our own Apiary........86
"Primary" Department........88
Grape vines, training for shade........88
A scene in the Apiary........88
Answers to problems etc........89
Shall Queens be reared from the egg?........89
Can pollen be wintered out of the hive?........89
Editorial........90
Getting ready for winter........90
Queens by mail........90
Comb building; how to get all worker comb..91
Page.
Problem No. 24........91
Who buys honey........92
Who has honey to sell........92
Honey column........92
Heads of Grain........93
Report from an Apiary........93
Early pasturage for bees........93
Why pollen is lacking........93
"Smothering" new swarms........94
How to sell nice wax........94
How to get the bees off the combs........94
Extracted versus comb honey........95
Freezing out the moth miller........96
Strait combs........96
Eggs by mail........90, 95, 96

SUNDRY MATTERS.

MR. A. I. ROOT, Dear Sir:—The two Standard Hives you sent me at different times, at Newville, reached me safely, but were rather slow in coming. The first one, sent complete by freight, was two weeks on the way, and owing to the warehouse men piling other articles on top of it and forgetting about it, I did not get it for more than a week after it arrived. The freight was $1.80. The second hive, sent in a bundle by express, arrived at the end of a week. Express charges $1.45.

WILLIAM L. AU, Newburg, Pa. July 6th, 1874.

The hive sent by express was tied up in a bundle with *strong paper*, thus occupying much less space than a nailed up hive; also, a bundle, done up in paper seems to be regarded by the express men as something of less value than a boxed article, and is therefore carried for a less amount. We are all well aware that 'tis but poor encouragement for our customers to have to pay $3.75 express charges on a hive that only costs $3.50, as has happened in some cases where the distance has been great.

I shall have more Corners after this, I am so well pleased with them because I can handle my bees now without making a "smoke house" of a hive. I have been using closed side frames.

JOHN F. DIPMAN, Fremont, Ohio.

We take great pleasure in saying our Medina Co. bee-keepers have filled nearly all orders for $1.00 Queens, and consider themselves now able to send as many as will probably be wanted, promptly. For some reason or other, our Southern friends seem to have pretty much all failed in the undertaking, so for the present the Queen business devolves on the residents of our more Northern clime.

As we are personally unable to engage in Queen-rearing for the market at present, orders had better be sent directly to our neighbors whose names appear in the list; Messrs. Dean, Blakeslee and Phelps are rearing the most at present. When we have learned how to winter without losing ¾ of our bees or more, *we* shall be prepared to take up Queen-rearing again.

The probability is that dollar Queens can only be furnished during the months of July, Aug., Sept., and perhaps Oct.; will those who wish them, please bear it in mind, and shape their orders accordingly. We are also happy to state that we have one man among our number equal to the task of sending Queens safely to Texas. See extract below:

MR. A. I. ROOT:—I rec'd on last Saturday, 11 inst, an Italian Queen in one of your mailing boxes. Fine golden color, every worker alive and gay—from G. W. Dean, River Styx. Medina Co. O. I rec'd two from ——— of ——— both dead, I am now satisfied from bad packing. M. S. KLUM, Sherman, Texas, July 17th, 1874.

A subscriber sends us for publication, a pretty severe criticism on H. A. King & Co's smoker. We extract as follows:

I will briefly describe this Bee Smoker. A small bellows of the kind ordinarily used, with handles extending beyond the hinge of the bellows, constitutes the "windy" part of the machine. By pressing the handles together the bellows is opened to receive air and a spring between the handles serves to shut up or drive the air from the bellows.

Well now the "tobacco pipe" in which the "rags, wood, punk or tobacco" is burned, is a wooden (!) bowl about one inch in diameter and about one and three quarters inches deep, to which a stem is attached. A hole is made in the bellows and the bowl is inserted; no valve prevents the smoke and smoking material from falling into the bellows, which with the wooden bowl, we should very soon expect to see consumed by fire, thus losing altogether the "neat and convenient" machine.

Again, think of the *quantity* of wood or punk capable of going into a bowl of the dimensions named.

In closing we most earnestly urge dealers in "Apiarian Supplies" to refrain from taking away from Mr. Quinby the sale of this, his most ingenious and perhaps most useful invention. That he *could* have it patented we have no doubt. Respectfully,

J. H. Nellis, Canajoharie, N. Y. June 14, 1874.

To satisfy ourselves that this was not too severe we ordered one of the Smokers and find it even worse than described above. Compared with Quinby's, the workmanship is very poor; rubber cloth is used for the bellows instead of leather and if the machine is turned over, nothing prevents the coals from falling directly inside. Filled with our best punk, it burned less than 10 minutes, and at the third trial set on fire the wooden bowl and the *reed* pipe stem attached to it. Cost postage and all, $1.60.

THERE are considerably many calls for eggs from our imported Queen, and several are succeeding even at a distance. As many wish eggs of a certain age only, to try the experiment, and as 'tis difficult to get her majesty to lay in the precise comb desired, we we will on the 11th of this month, remove all her combs giving her new ones, with the exception of one perhaps, containing only *hatching* brood. We can thus give our friends eggs of the age they wish with precision, if their orders are sent in before the 12th, or eggs in the midst of hatching brood (which has inherent animal warmth) if they desire. The price will be 25c in paper boxes, or 35c in a wooden box packed as described on another page.

Clark & Holcomb,
HONEY LABEL
PRINTERS,
Medina, - - -Ohio.

PRICES:

1000, Gummed and Cut,	$2.75
500, " " "	2.00
250, " " "	1.50

Sent post-paid on receipt of price.
Samples sent if desired. Address,

CLARK & HOLCOMB, Medina, O.

GENUINE ITALIAN QUEENS.

REARED from stock imported by Mrs. Tupper. Purity and safe arrival by mail guaranteed.

Each	$2.50
Six	12.00
Ten for	18.00

8t9 Address A. N. DRAPER, Upper Alton, Ills.

FOR SALE.

On account of departure for California.

AN Apiary of 125 stocks of bees in Langstroth and Simplicity hives, 30 new hives, about 1000 empty combs (new), Extractor etc. Also, an improved farm of 253 acres, prairie and timber, in whole or part to suit, must be seen to be appreciated; a bargain sure.

For further particulars apply to or address

F. H. HARKINS, Home, Brown Co., Minn.

TESTED ITALIAN QUEENS—Sent by mail $3.00 each.

Nucleus Hives, untested Queen, bees and all sent by express for $3.00. Queens bred from pure mothers warranted fertile, with no other guarantee, sent by mail $1.00.

Orders will be filled strictly in rotation.

Address J. SHAW & SON, Chatham Center,
3t or I. E. DANIELS, Lodi, Medina Co., O.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. II. AUGUST 1, 1874. No. VIII

HOW TO CONDUCT AN APIARY.

No. 8.

COULD we know just what the yield of honey would be during this month, with each of our readers, we might advise much more to the point, but whatever the circumstances may be, please do *not* let your Apiary run down, and get grown up with weeds. We have had much to say on this matter 'tis true, but it seems so natural to find every thing allowed to run down after the honey yield has ceased, that we fear very much more will need be said before Apiaries are kept like a "tidy workshop" especially in the fall of the year.

There are very many points still so unsettled, that we cannot as yet decide on what is best; they are now under the consideration of our best thinkers and "doers" too for that matter. For instance: How large had we best make our hives? *We* certainly are not prepared to decide at present. A visit to some very successful neighboring Apiarians gives no positive grounds for a decision on the subject. Two of their owners, are quite confident that a quart of Italian bees will gather about the same quantity of honey whether they are a nucleus by themselves, or whether they form a part of a two story hive, or whether they belong to a four foot New Idea hive; and in the former case the Apiarist can secure nearly as much of an income from them, from the sale of Queens, as from the honey they gather.

Our friend Dean, of River Styx, as we have before mentioned has before this season only used a single story hive, containing when full, 12 Gallup frames. He always uses a division board, and moves it up so as to have the bees fill their space at all times, in fact quite a swarm issued while we were there, and we were informed they came all from a *one comb* nucleus. This seemed incredible, but after he had taken away their Queen to induce them to go back, we looked inside and found the whole space on both sides of the comb, *full of bees.* No wonder he is successful, these bees filled their one comb with honey as soon as the full stocks filled their twelve combs, and so on through his 40 or 50 colonies. The certainty and ease with which he built up colonies and raised Queens, made his bees build all worker comb of beautiful evenness and regularity, etc. etc., was enough to make any one think the pursuit the most fascinating in the world. Although he has three of the four foot hives under way, he did not seem disposed to agree on their universal adoption, and he could not think of abandoning his division boards any sooner than abandoning hives, to use his own expression. Mr. Blakeslee uses the Langstroth hive and he thinks his bees that are rearing Queens, give him nearly if not quite as much honey as if they were in a large hive. Our own bees are at present in single story Simplicity L. frame hives, and the lightness and ease with which we handle them (when there is no upper story on) tempts us very much to be satisfied with our Langstroth frames, and never to think of any other. As we had intended to increase without any thought of surplus this season, we have been very agreeably surprised to find that a one story hive *crammed full of bees* will give a very large amount of honey, if it be extracted promptly when the hive is full. It is true that our Standard hive can be allowed to go 8 days, when our Simplicities would need emptying in 4, but the latter only take about half the time and the L. frames standing square before you in their shallow hives, are much the easiest to manipulate. Please remember that we are only considering both sides of the matter without making a positive decision either way, but we would advise those who like ourselves have a thousand or two of nice L. combs, to be in no haste about transferring them into something else. When bee-keepers decide whether they wish a hive to contain 10, 20, 30 or 40 combs, we can tell better what shape we wish our combs to have. Again: What about wintering? We really cannot gather that the very long hives have practically shown themselves much, if any superior to the ten frame hives, when the latter contained plenty of bees; the former having dwindled down in some localities, just about the same as the others.

Now it will be very well to begin this month, to consider the matter of wintering, and those who decide on wintering on natural stores should cease using the extractor in time to allow them to fill up nicely. As no report has ever been given showing that sugar-syrup was *inferior* to natural stores we shall still advise taking away the good honey and feeding the cheaper food. We cannot gather that the syrup stores have any influence either way on the recent troubles in getting them through the months of March and April.

In regard to cider mills; as soon as the bees commence visiting them or the groceries, we would advise keeping them elsewhere employed on dry sugar, and our experiments last fall, though made late, and not conclusive, seem to indicate that the remedy may be effectual. We would keep them away from the cider mills on account of the great number that are there drowned and killed, if for no *other* reason. Those who are anxious to increase the number of their colonies in the fall, or to rear Queens, should keep them busy on the dry sugar, if possible just as soon as the yield of honey fails, for they are quite apt to make bad work when first disappointed in getting their customary daily stores, unless carefully watched. 'Tis true we must expect to feed our neighbors' bees as well, but is not this preferable to having our bees annoy other neighbors?

We do not think any method of feeding in the hive can answer the same purpose, for whatever is in the hive is theirs already, and 'tis "bee like" to feel that "the more they have, the more they want."

"Now see here Mr. N., you have written as though 'twere possible to make a one story L. hive hold a whole colony the season through. What is to done with the surplus bees and brood?"

"Why make new colonies when the hive gets too full, of course."

"But suppose the Apiarist has as many as he wishes already?"

"Sell 'em."

"So you would have the production of new colonies always go hand in hand with surplus honey?"

"Or rather we would simply make the suggestion."

"'Twere much better as a suggestion than given as a part of 'How to Conduct an Apiary.'"

In one case we are dependant on a single Queen for the peopling of perhaps 30 combs, in the other only 10; now if a 30 comb hive gives 300 lbs. surplus, will not the other give safely 100? in the former case the whole is dependant on the caprice of a *single* Queen, and Queens *are* capricious in regard to the number of eggs they lay, at least we find them so.

Our Queens sometimes lay 2000 eggs per day for a short time; but so far as keeping them at work at this rate is concerned, *we* have not been able to come any where near it.

In conclusion we would say that we consider the Standard hive by all means preferable, when one is commencing anew and can choose that as well as any other; also, for a hive that can be used to allow all of the Queen's progeny to labor without increasing the number of stocks, we should give it the preference unhesitatingly, over a two story hive.

Friend Muth of Cincinnati, who has had much experience, advises that honey be run into large cans, milk cans for instance, and allowed to stand several days to settle, and allow of what scum may rise to the surface being skimmed off before barreling it. This will make some additional trouble, but may be quite an important item; we have not as yet been able to give the matter a careful test, but will say this much, that our honey has always had a bad habit of expanding when it candies, so much so that it generally oozes out around the mouth of the jars, in a very untidy and inconvenient way. If, as friend M. thinks, this can be remedied by allowing it to stand, and removing the scum etc., we should certainly do it. Will our friends please report.

Again, we last season recommended using half rosin with the wax for waxing barrels, and we thought we had given it a thorough test, for the honey had no rosin taste even after being several months in the barrel; but this spring having occasion to use a barrel that had some honey candied on its sides, we found on pouring it out after it had been standing in the sun until melted, that it had a considerable taste of resin. In view of this we think beeswax alone had better be used. If it is made very hot and not less than ½ gallon used, 'twill take but little to make all tight.

OUR OWN APIARY.

HAD we not grown sober and steady of late, we presume we should now be sailing our hat on account of the sudden, very welcome intelligence given us by the bees, that the basswood trees were loaded with honey.

We had abandoned all hope of doing more this season than to build up our shattered colonies, but to-day, July 6th, we have taken more than half a barrel of nice thick honey, and during the whole time we were extracting, not a robber interfered with our work. It really seems like old times. Not even smoke was required until we came to our natural swarms of common bees. And by the way, that reminds us that we haven't told about this same good fortune of ours. It was June 25th, and we were all intent on our July No. you see, when a neighbor persisted in wanting to see Novice. His first remark was, "Well Mr. N., if you were sick you would send for the Doctor would you not?"

Novice replied that he probably should, mentally feeling that he hadn't time to be sick "no how" just then; but his face became genial in an instant when the Doctor—for he it was—suggested that "no one was sick, but that a huge swarm of bees were clustered on a bush in his garden and he thought the only proper thing to be done was to send for—"

"Are they hanging in the sun?" interrupted Novice, for the day was an intensely hot one and it was near noon. When informed they were, he waited only to get two perforated tin cases out of the wax extractors and started for the "big swarm of bees." Alas for human hopes; when he arrived at the bush, the bees had decamped and nothing remained but to go home again, mentally avowing that he would next time collect his scattered wits five minutes quicker when told a swarm of bees were to be had for the hiving.

Worst of all, he had planned just which empty hive, in the shade of an especial grape vine, they were to occupy, and he couldn't quite give it up; so when informed after dinner that some workmen had hived a swarm in a box, and wanted to sell them to him, he made such rapid strides for them that, in less than half an hour he had them all fixed in their shady home, and rejoicing over their treasures of partly filled combs, among which had been put one of unsealed brood, to be sure they did not desert. The men who hived them were also rejoicing over $2.50 which they received just for putting them in an old box. Before dismissing them, we may add that they have already yielded in ten days enough honey to pay first cost, and so we may consider it a pretty fair investment. We at first considered this to be the truant swarm of the forenoon, but on learning they had been hived about nine o'clock, contented ourselves in thinking that if we had not *the*, we had got *a* swarm, and about sun set Novice had a sudden revival of the swarming fever caused by a report that a "big swarm of bees" were hanging on a plum tree, and had been all the P. M., during a heavy thunderstorm, and that no one would hive them, there were so many, etc. No wonder he got his metal baskets again and traveled for the point mentioned. Sure enough, there they were, looking wet and rather sorry; a few twigs of the plum tree foliage were tied in the bottom of one of the baskets and he essayed to make them cluster inside, when inverted, but they were so chilled that when a bunch of them as large as a large apple fell into the bushes and grass underneath, he decided to hold the other basket under them. As they were clustered on the body and limbs of the tree, it was rather slow work, but he finally got them all "bagged" except the bunch that fell down. They were taken home and hastily emptied before the hives, the swarm being so large 'twas thought best to divide it. A card containing *eggs* only, from the imported Queen was provided for the Queenless part, and they were coaxed into the hives; but both divisions would persist in running out again "pell-mell" until a frame containing *unsealed larvæ* was given them, besides the comb containing the eggs. Shortly after daylight next morning Novice once more repaired to the plum tree and found about a pint of bees clustered on its trunk and the Queen among them "to be sure." She was given to the largest half, and they have now given us one nice new comb, and a hive full of honey, and the Queenless part, after having the comb of larvæ taken away from them next day—'twas only loaned—have built nine Queen cells, and given us half a hive full of honey; and we have to-day given them six combs of hatching brood into which we shall insert the cells, one in each, that none may be torn down. By the way the eight Queens we reared in our first lot are now *all* laying. Isn't that pretty well to get a laying Queen from every cell started?

By the way, another swarm of bees was hived in a box July 3rd, and we were consulted as to what was best to be done with them. As formerly, "a swarm in July were not worth a fly," we only offered $1.50 for them, but the women folks where they alighted considered them a lucky omen, and thought the amount but very poor compensation for "selling ones luck." We explained to them that they were almost useless property to any one who had no empty combs to give them, as we had, but finally paid $1.75 and carried them half a mile in a large box without any bottom. These have in three days, given us half a hive full of honey, which is a strong argument in favor of keeping a supply of empty combs and an extractor on hand; for how much could these bees have done had they been compelled to build the combs?

Once more we have an Apiary with a population sufficient to make the air resound with gladness, and equal to the task of getting up a respectable roar at the close of the day, when the yield of honey has been encouraging. Although we try not to borrow trouble for the future, dim visions of "cider mills" and bees all dead and dying will intrude themselves at times.

On yesterday morning we followed the line the greater part of them were taking to the basswoods, and we found the trees bending beneath their load of blossoms. These when held so the sun shone down into them showed a tiny glistening drop of pure honey in the little cup formed by the petals of the flowers: this drop is sufficient to be tasted readily and is so convenient of access that 'tis no wonder at all that bees get crazy for it, and that they gather astonishing quantities, for a load could be obtained from a very few blossoms and in a comparatively short time. After seeing how the honey is secreted, the great yields from the Linden forests of the West seem easier to understand, but the yield is very uncertain here, or at least has been for the past few years.

"Yes, just 45 colonies, and over 850 lbs. of honey," Novice was saying.

"But," says his interlocutor, "You have not made them all from the 16 very weak colonies which you said comprised your whole Apiary June 8th,? It is now July 22nd, and from 16 to 45 in a little more than six weeks sounds like a pretty large result even had the 16 been strong. Have you purchased none at all?"

"Well, let us see: P. G. *did* purchase a colony of Blacks about June 1st, to test one of her projects. As she couldn't wait a minute to have it Italianized, she commenced operations at once by killing the Black Queen without considering the length of time 'twould take to replace her; so the bees and brood were eventually incorporated with the common stock. Then we purchased a natural swarm (Blacks) June 25th, for $2.50, a second one July 3rd, for $1.75, and a third—second swarm with unfertile Queen—July 7th, for $1.25. This is all except a fourth natural swarm found without an owner as we have mentioned, June 25th."

"But what became of your resolution to make your Apiary self sustaining and not to purchase?"

"Well, in the first place P. G's orphaned colony were losing so much time for want of a Queen of which we had a superfluity, and the natural swarm waiting to be cared for in a cold unfeeling world—"

"Hold on Mr. N.; isn't that pretty cool philanthropy? How many lbs. of honey did this 'unprotected swarm,' put in the empty combs you gave it?" Full 75 lbs. worth 20c. per lb. did they not?" Novice assented.

"And you divided the swarm at that, and set the other half rearing Queen cells if we are not mistaken? Yes, well P. G. says you made them construct two lots in succession, amounting to 15 or 20 in all. Now these cells from imported stock were worth just then something like $10.00 and as they gave you honey too all the time, it seems that your 'cold unfeeling world' let about $30.00 slide through their fingers which you in your *philanthropy* didn't. But go on."

Strange to say, Novice for once in the world declines being voluble even on bees, and so we shall have to end our chapter until next month.

P. S.—Our first eight Queen cells, gave us 8 Queens and they are all laying. Our second, third, and fourth lots might have done as well, had we followed *our own* teachings.

OUR PRIMARY DEPARTMENT,

Or First Principles in Bee-Keeping.

[Designed especially for the veriest novices, and those who know nothing of bees whatever. Conducted by a fellow Novice of several years experience replete with blunders, as well as with occasional successes.]

WHAT kind of a colony of bees to purchase? We would advise that you take whatever comes handiest, if there are only *lots of bees* in the hive. You will have to transfer it any way, and so it will not make any great difference what contains them. Bees in a box hive are valued at from 2½ to $10.00 according to season, locality and strength of colony. If you could beg, borrow or steal a few empty combs, the simplest way in the world would be to buy a natural swarm, if one could be obtained within a day or two after having come out. Of course the word "steal" is not really intended, for we expect all bee-keepers if they wish really to enjoy their possessions to render a full fair equivalent for every thing, that they may feel 'tis all honestly earned by the sweat of their brow.

Whatever the hive may be, locate it on the north side of the trellis as described last month, make it level unless 'tis intended to slant a little from the entrance to shed rain, and have the entrance on the east side. Bank it around with saw-dust far enough so that you can go down on your knees safely at any side of it. It's good for one to go down on their knees sometimes, and if you would be an Apiarist the sooner you bow as a submissive pupil to kind old dame nature, the better.

Now we are not going to trouble ourselves to tell you which are the workers, and which are the drones etc., for 'tis your business to learn that yourself. The colony is to be transferred into a Standard hive bye and bye, but before you undertake such an operation you are to get *thoroughly acquainted* with your little friends. You should be so familiar with them in fact that you can lie down in front of the entrance and examine the movements of their antennae with a magnifier as they greet new comers who return with a load of pollen or honey. You should also be able to distinguish at a glance a bee filled with honey from one that is not, that you may be able to detect robbing at its commencement. Nothing but close careful observation will enable you to do this. They will very soon get so accustomed to your presence that they will not be disturbed at all, and will alight on your face when heavily laden as confidingly as if it were their own threshold. You should be able to distinguish at once by their hum or note whether they are in a quarrelsome mood or only busy in the faithful discharge of their duties. We remember well our troubles during our first season with bees; they had been robbing some, and in the afternoon we found a quantity of bees hovering about the entrance, crowding in and out, and making a sad hubbub, as we thought; we so closed the entrance, and then felt sure 'twas robbing for they piled over it and made frantic efforts to get in. Soon another colony was "attacked" and we closed them up and, oh dear, such a worry as we had. As they didn't go home at dusk we let them in and it finally dawned on our understanding that 'twas only the young bees at play, as they almost always do from 12 till 3 or 4 o'clock P. M. We had not then learned the peculiar "robbing note" nor did we know that swarming was always indicated by a sound that a bee never emits at any other occurrence in life, and worst of all we could not distinguish a loaded bee from one that was not. If you learn all these things before transferring 'twill be all the better. A folding, or camp chair as they are sometimes called is very convenient and then 'tis pleasant to take a book or paper and sit by your hive and grape vine. The hum of their industry, to us, is the finest accompaniment for enjoyable reading.

Now both this hive, and the vine are expected to increase and multiply in time, and this vine is to have its one shoot tied to the central wire D, as fast as it grows, pinching off all side shoots after they have made one leaf. When it gets to the top of the trellis, pinch it off also, and it will soon throw out side shoots. Pinch all off again except one on each side near the bottom bar B. Train these by tying, strait out horizontally until they reach the posts, then train them up the posts and pinch them off like the middle one. Now get two more shoots to train up the wires C, and E, and we are done. The future treatment of the vines consists only in cutting the upright shoots all back to the horizontal arms tied to the lower bar B, every winter, and training *two* new shoots up each wire and post every summer, and pinching them off whenever they get to the top.

Next month we'll tell how to "swarm grape vines" artificially as well as more about the bees.

A SCENE IN THE APIARY.

TIME, July 10th, about dusk. Blue Eyes in charge of Mrs. N. is perched up on one side of the extractor bench with one fat arm stretched over to the crank, and while she is enjoying herself hugely in making it spin, Mrs. N. is telling Novice that she will take one of the best $10.00 extractors and *must have it immediately* as she wishes it to keep the baby quiet. Novice however is dolefully contemplating his ankles just now, and seems evidently troubled about some matter more weighty than the simple fact that they are only "useful" and not "ornamental." The real trouble is this: the hives have just been discovered to be a little too full for the best economy, and P. G. in her ambition to have as many hives as possible emptied before dark, persuaded him he could do "just one more." This last one had made such progress in gathering honey, and the Queen had filled such nice combs with brood (they had been unable to repel robbers a *very few* weeks ago) that he took so much time to contemplate the snowy wreathed combs, containing the basswood honey—he called it "dew of heaven" a few days before when an attempt was made to take out some before it was sufficiently ripened, but P. G. suggested that our honey customers might have a decided preference for *real honey*, after they had paid their money, in place of the aforesaid "dew" and so extracting was adjourned until the evening in question—well, as we said before, he forgot 'twas nearly dark and almost neglected to respond to Blue Eyes' crows of delight which are invariably addressed to her Papa when he is'nt too busy—now before going further 'twill really be necessary to state that Novice wears linen trousers when extracting, for Mrs. N. says if he must go down on his knees so much, something must be worn that will wash; and as the young bees have quite a trick of crawling in inconvenient directions, he always tucks these linen pants into his stockings when at work.

After the last comb was taken out he concluded the Quinby smoker (none had been used before) had better be lighted before replacing them, and by the time this was done it was just about dark enough for the bees to get into that kind of a careless way of stinging promiscuously, when disturbed, any thing that they can see regardless of smoke or almost any thing else. Now these white stockings—for a wonder they *were* tolerably white—seemed to the bees just the thing to "go for," and they did so and discovered a "break in the armor" between his low shoes and the linen pants, protected by only one thickness of thin cotton, *and that is why he is looking dolefully at his ankles.*

Meanwhile P. G. has put the cappings in the wax extractor, tied the cloth cover over the honey extractor, wiped up the floor if any honey had been dropped—by the way Novice says that *she too* got enthusiastic and kept on extracting long after the barrel was full, until in fact a half gallon or more had run over on the floor; but this was probably a little exaggerated on account of his "ankles"—and the Apiary is now quiet. The bees are uniting in a contented hum whose volume once more indicates life in the recently desolated Apiary; Blue Eyes is sleeping the peaceful sleep of childhood, and we, before dropping our pen devoutly hope that all our readers have as abundant cause for thankfulness during the hight of the basswood season as have we.

ANSWER TO PROBLEM ETC.

HAS Problem No. 13 been solved yet? Our bees are bringing in pollen very fast now. In fact the supply seems to be far in excess of the demand; and I could take from each of my hives one frame completely filled with it. But can it be kept in good state until next spring, *and how?*

S. W. STEVENS, Ridgefield, Conn.

Pollen taken out late in the fall will keep safely and will be used at once by bees in the spring in this locality, but we should fear it would get sour or mould if removed in warm weather. Your hives may seem to have an excess to-day yet if examined a week later, when brood is being reared largely, we sometimes find it nearly all gone. We have recently seen a frame emptied of pollen in so short a time that it seemed strange where it could have gone.

ANSWER TO PROBLEM NO. 23.

Queens raised from eggs are longer lived but no more prolific, for the time they live, than an 8 or 10 day Queen. A 10 day Queen will rarely live one year, while an 8 day Queen is good for only about 4 months. By the way, Mr. Editor why is it that Queens sent out by breeders are so invariably short lived? I have had Queens from nearly every breeder in the United States, and with but one exception none of them ever lived to see 16 months. But to return, in 1870 I raised a set of cells from a strong colony and just before the first was hatched, I took them all away and gave them a frame of brood in all stages. They reared about 20 cells, about one third of which hatched in 8 days, the majority on the 9th, and 2 or three on the 10th. They were all small, but little larger than a worker. I succeeded in getting 5 out of the lot fertilized, one on the 16th day after they were hatched, two the 17th, and two the 19th. They were as prolific as any Queens I had as far as I could see, but one died of old age in 3 months, 2 lived nearly 5 months, and the other 2 died during the winter. Queens usually are laying from 7 to 9 days after they are hatched, with us, and if a Queen is not laying within 12 days we always kill her, deeming her worthless. We have repeated the experiment alluded to above once or twice since with the same results. Bees getting but little honey as yet. It rains nearly all the while—ground soaked—Basswood will not be open in a week yet.

G. M. DOOLITTLE, Borodino, N. Y. July 9th. 1874.

DEAR NOVICE:—In answer to your problem No. 23 on the cover of GLEANINGS, for July, I see no difference between queens raised from the eggs, or queens raised from grubs already three days old. Besides I have very often remarked that out of a lot of queen cells, those that hatched last were generally poorest. Every time I have had queens hatched later than sixteen days, they were of little value, while those hatched in ten days proved to be the best. It seems that as soon as the colony finds it is queenless, it gives a superabundance of care to the grubs chosen to be raised as queens. After a few days the care given the second chosen grubs is lessened, and the queens produced are poorer. I can see no reason why a grub three days old would be of less value than an egg, to be transformed into a queen, since if we give the bees grubs of that age and eggs, they will prefer the grubs. I think bees know their business better than we do. Besides it is to-day a well ascertained fact, that the jelly given the grubs, for the first three days after hatching, is the same as that given the young queen; and that the grubs can eat of it as much as they want since they lay in a thick layer of that jelly. CHAS. DADANT, Hamilton, Ills.

We are much inclined to think eggs preferable, and we feel satisfied that the young larvæ should literally swim in the royal jelly just as soon as hatched. That this is not usually the case with the small worker larvæ, observation will readily show. If we wish to grow a strong specimen of any plant or animal, *plenty of food* is the great desideratum. Even *cramming* is sometimes necessary to get the desired result, as in fattening fowls for instance, and if we wish Queens to live four years and to lay eggs up to the figure fixed by Young America of modern times, she should have all the jelly she can possibly use and a spoonful (or less) should be found in the cell after she is hatched. How is it brother bee-keepers, after your Queens are hatched out do you find any food remaining in the cell? Look carefully and report. Again our recent troubles have really been that our worker bees have been too short lived. Now is it not possible that where so many bees are kept in one locality they fail to find a sufficiency of some one of the essentials needed to give them perfection of vigor and constitution. Novice here suggests that the whole trouble may be the want of *salt;* some writers on poultry now claim that salting the hens regularly will surely prevent the Chicken Cholera.

FRIEND NOVICE: Double a woolen cloth and put under your water bottle; and to one qt. add ½ tablespoonful of common salt then your bees will have salt water. My bees took about a gallon a day, when breeding fast last summer. The cloth will soak with water and gives bees a nice chance to suck it out. Put sheared side of cloth up. When getting salt water they got fresh water at the same time so perhaps you had better "rig" two bottles, for each.

J. D. KRUSCHKE, Berlin, Wis.

We have got a salt water jar "rigged" but they don't take to it as yet. We have at times noticed bees when they seemed eager for salt.

Gleanings in Bee Culture,
Published Monthly,
A. I. ROOT & CO.,
EDITORS AND PROPRIETORS
MEDINA, OHIO.
Terms: 75c. Per Annum.
For Club Rates see Last Page.

MEDINA, AUG. 1, 1874.

A. B. J. and *B. K. M.*, were on our table promptly, and the *World* a few days afterward. All good. *N. B. J.*, at present writing has not put in an appearance.

Warranted Queens for 1.50, we think full as cheap as the dollar Queens without warrant, and our old friend Alley has agreed to the former rate for the season. See Advertisement.

"BLASTED Hopes" and doleful visages, have for the past few weeks been giving way to "Reports Encouraging" and bright anticipations of long "Rolls of Honor;" but we're too small to chronicle all of the latter.

A BEAUTIFUL EXPERIMENT—Give a natural swarm a hive full of empty combs, and extract the honey as often as the combs are filled. The nice part of it is, that they frequently give you $10.00 worth of honey in a week after hiving.

WE with pleasure notice that C. O. Perrine has commenced settling up his old debts in a manner quite satisfactory. As he has perhaps bought more honey than any other dealer in America, we shall be quite happy to hear he has regained confidence by an honorable settlement of all old accounts.

◆

CANNOT some of our subscribers advertise bees for sale? We have many inquiries, but cannot direct them where to send. Adam Grimm's notice would do very well for those in that vicinity, but 'tis expensive and risky sending so far. Who will furnish Italian colonies at a moderate price in the Southern and Middle states?

◆

OUR Agricultural exchanges although full of valuable matter, contain little on bees beside extracts from the Bee Journals. The *Rural New Yorker* contains an excellent plea, from a dealer in Groceries and Provisions, for pure honey, and prices within the reach of the masses. Had they given his address *in full* we might have shown him that laborers were already in the field.

◆

KIND Uncle Samuel now carries merchandise of all kinds, as well as seeds and plants, for *eight* cents per lb., and 4 lbs. may be sent in one package, instead of 12 oz. as formerly. In fact we could send a Simplicity hive by mail now, if any one should desire; the postage would be just about as much as the hive, viz, 90c each, and they would have to be sent in about six pieces. But half the amount mentioned on our price list for postage on the articles we advertised, need be sent for postage hereafter, with the exception of seeds, which remain as heretofore.

◆

OUR enterprising friend Muth, of Cincinnati, sends us a sample of his 50c honey knives which we really think will prove "as good as any" for uncapping at least. It certainly cannot boast of much pretentions to beauty in its "get up," but it has a fine steel blade very thin, and sharp, ready for use, and it is fixed very firmly in its plain wooden handle. For the business of uncapping only, we do not see how it can be improved; but for other work, such as transferring etc., the long slender blade and peculiar handle of those we furnish, will be, we think in some respects, preferable. We wish Mr. M. a large trade in them, as we do every one, who aims to cheapen Apiarian supplies.

◆

THE Quinby Smoker, has become almost indispensable to us. 'Tis true it bothered by going out at first but since we gathered a supply of "punk" we have gone our way rejoicing. This can be gathered in any forest containing maple stumps or logs; 'tis a species of fungus that grows out of them somewhat like mushrooms. Carry along a heavy hammer, for they are hard to break off; when they are first gathered they are to be choppød in pieces small enough to go into the smoker readily, and dried thoroughly, in an oven or otherwise. This substance burns longer than any thing else with which we are acquainted and never goes out where it can have even a very small supply of air. Who will put some in the market, nicely prepared?

◆

AFTER a Queen hatches, she usually leaves the cap hinged to the cell like a door, and it often springs shut after she has passed out. Now the bees sometimes wax this cover down again, and the Apiarist looks at his cell in disappointment, for several days perhaps, waiting for his Queen to hatch, while she is crawling about the hive as unconcerned as can be. We mention this because several blunders have been caused thereby, one of which we were a party to, in fact we assisted in persecuting a princess, as an interloper, all because her cell seemed to be unhatched. After she had flown away from such rude treatment and was hopelessly lost, 'twas found that the innocent looking cell was only a hollow fraud with the aforesaid door shut.

◆

ANY colonies not having a "hive full" of bees should be fed at once, if honey has ceased coming in, to keep brood rearing under full headway that we may have plenty of bees for wintering. Never lose sight of the fact that whenever brood-rearing is stopped, if it be for ten days only, it will produce its effect, it may be months hence, perhaps while we are getting them through a snow-storm in April, but the gap will come where bees too old, and brood too young, blocks progress for the time being. Give them all they can use without filling the combs so as to crowd the Queen; this can only be determined by examination, say, once in three days. Use sugar syrup, and should you thus give them their winter supply it will be in the best shape possible, and just as they naturally have it.

◆

SENDING QUEENS BY MAIL, Mrs. Tupper thinks to be wrong, as there have been *rulings* by the assistant P. M. G. to that effect. If such of our readers as are interested in the matter, will read Vick's Floral Guide No. 3, they can see that this is not the only case in which the acsurdity of some of these "rulings" has caused them to be ignored by every one, unless it be occasionally some P. M. who imagines it a duty to show his authority by hindering the progress of a harmless and innocent branch of agricultural industry. We can send queens safely to Texas now, for one cent providing no writing is put in the package; if sent by express the charge would be a dollar or two. Are we to understand a dozen bees put up in a stout metal cage are to be an exception to all other kinds of produce and merchandise? Perhaps the new law that took effect July 1st mentioned elswhere may include queens. We hope so.

COMB BUILDING; HOW TO GET ALL WORKER COMBS ETC., ETC.

NOVICE:—Can you tell me why my bees build but very little comb, and why that little is ¾ drone comb. I have put them into double Simplicity hives and given them what empty combs I had and they have increased in numbers beyond my expectations, but when I put in empty frames they leave them several days before commencing work on them, and then start very reluctantly and nearly every time begin with drone comb. As I am anxious to get worker comb, I have tried cutting out the drone comb but to no purpose, they immediately commence drone comb again.

We have never failed in getting bees to build comb rapidly, when we could secure warmth, plenty of food, and plenty of bees. It does not seem to be sufficient, that they have an abundance of stores in the hive, but they must be adding to their stores daily; in fact we have thought they only built comb when there seemed a probability that it would be needed to hold their provisions.

One other fact must be remembered, and that is, bees almost cease comb building when they get the swarming fever; in the case mentioned above, we infer that our friend neglected to use his extractor, until the bees had decided to swarm and then they would not give it up. When honey is coming in briskly, we would empty every comb, and commence soon enough too, to discourage all attempts at swarming.

About the worker comb: We too have had nearly all the combs built this season mostly drone comb, and after hearing that friend Dean of River Styx, knew how to induce his bees to build such comb as he desired, we paid him a visit with this particular idea uppermost. Sure enough his bees *were* building the whitest straitest, and most beautiful comb we ever saw in all our experience. We were told to examine any of his hives we chose—there were 40 or 50—and we found entire worker comb in almost all. One colony it seems had disobeyed orders and had made a beautiful oval disc of drone comb; when he took it up quickly we were surprised to see him turn it over horizontally (in a way that we might expect a novice to handle new combs, but not an old bee-keeper), and coolly break it off for them to commence over again.

"But friend D. they will only build more just like it."

"No they will not; I will take away some more of their combs."

"But they have only three besides the empty frame now."

"Then they shall have only two."

"And if that don't do."

"Then they shall have but one; but 'tis seldom necessary to cut them down so close as that."

"But friend D., you would lose much honey if you deprived your heavy colonies of all but one or two combs?"

"That is just the point; I make my nuclei and weak colonies do all the comb building, and they will make quite a number each, during the season, besides storing a goodly crop of honey."

Our readers should remember that division boards were used—Gallup hive—and each of the comb building nuclei was crammed full of bees, but a happier and more peaceful Apiary 'twas never before our lot to see.

Two or three swarms also persist in making Queen cells and wanting to swarm, and I keep cutting them out. In two instances where I overlooked Queen cells they sealed them up and cast very heavy swarms; but I returned them again, cutting out the Queen cells, hoping to force them to make comb. The combs are now literally crowded with bees. The honey product has been very light but all the swarms have had some capped honey all the time. Would it have been better to let them swarm? Have not extracted any honey yet.

The trouble is again that you didn't use your extractor; take their honey *all away*, and they can't swarm. Yes, 'twould have been better to have let them swarm after they had got the fever so badly; you could have given them their old hives combs and all, in a new location, and they would have proved immensely industrious after they had gone through with the "programme."

Why is it that all at once most of my bees are so cross? Thus far during the season I have been able to handle them whenever I chose without any protection for face or hands. But for the last three days a little smoke seems to irritate them instead of quieting them. I have been just as careful in handling as ever, but all to no purpose. They come at me in a perfect swarm and will not leave till I go into a dark room.

Perhaps half our readers are in the same predicament; after the Basswood failed suddenly, they suddenly became as cross as if they had been stopped in some wholesale robbing raid, as in fact they have, and all we have to do is to keep cool and not tempt them by unguarded bits of comb and drops of honey, until they get over it. Drive them back with a good lot of smoke and make them fill themselves with honey if you can. Stings will be more liable from bees from other hives that are trying to rob them. We have to-day—25th,—only been able to see to our Queens etc., early in the morning, and were then obliged to desist after working about an hour on account of other bees rushing into a hive as soon as opened. We shall resume our work again about sunset or a little before.

What shall I do with drone comb when a part of a frame is filled with it? If I cut it out the bees persist in rebuilding with drone comb or leave the space empty.

Cut it out and insert a piece of worker comb, or have it filled out in a weak colony on the plan given.

We cannot answer the following question positively but think the Queen's fertility would not be impaired. At any rate we give it as

PROBLEM 24.

Will it render a Queen less prolific to keep her for a length of time in a small nucleus hive where she can lay but a few eggs each day than she would have been if she had been given to a large swarm as soon as she began to lay?

How do you fasten a division board in a hive to keep it in place?

Hang it (the board) as you do the frames.

Can I winter bees in double width Simplicity hives?

"Answer next May. Don't know nothin' 'bout winterin'."

The above was Novice's reply before we had time. We think the double hives will winter equally well. Should there be a great quantity of bees we would leave them on their summer stands, and house them only when they seemed to need it, if they did at all. Perhaps Novice is right after all.

Will it do to take nearly all the honey from a hive when it is coming in fast?

Every drop we should say. *Our* bees always get more in fifteen minutes or less.

Now who hasn't had just about the same trials as S.? It reminds us of our own work over again. The last we hear of him is as follows; we hope he bears it with resignation and will "hunt up" where the honey comes from.

July 23rd—I have commenced extracting—the first this year—took 44 lbs. from 4 hives. Not ¼ of it was capped but it is quite thick. Several other swarms are filling up fast. It is very dry here, I don't know where they get their honey.

JOSEPH SINTON, Ithaca, N. Y. July 10th, 1874.

HONEY COLUMN.

THE *A. B. J.* gives the following in regard to honey buyers.

CHICAGO.—Choice white comb honey, 28@30c; fair to good, 24@28c. Extracted, choice white, 14@16; fair to good, 10@12c; strained, 8@10c.

CINCINNATI.—Quotations from Chas. F. Muth, 976 Central Avenue.

Comb honey, 15@35, according to the condition of the honey and the size of the box or frame. Extracted choice white clover honey, 16c. ⅌ lb.

ST. LOUIS.—Quotations from W. G. Smith, 419 North Main st.

Choice white comb, 25@29c; fair to good, 16@22. Extracted choice white clover, 16@18c. Choice basswood honey, 14@16; fair to good, extracted, 8@12c; strained, 6@10c.

NEW YORK.—Quotations from E. A. Walker, 135 Oakland st., Greenport, L. I.

White honey in small glass boxes, 25c; dark 15@20c. Strained honey, 8@12c. Cuban honey, $1.00 ⅌ gal. St. Domingo, and Mexican, 90@95 ⅌ gal.

The Chicago Honey House, 360 Wabash Avenue, Chicago, Ills., has always been prompt and reliable we believe.

B. K. M. mentions that E. C. Hazard & Co. 192 and 194 Chambers St. N. Y. advertise for 10,000 lbs of honey, but as this amount would not cover the present crop of Medina Co., we think perhaps 'twill be as well to advise, as heretofore, that our friends develop their home market. After your honey is stored in barrels, place them in a cellar or away from the frost, that the honey may not candy too soon, and then draw it out by a suitable molasses gate into quart fruit jars, or jars made expressly for honey, and after it is neatly labeled leave it for sale at your neighboring stores and groceries, for ten miles around if need be.

If they are kept supplied *the year round*, an astonishing quantity will be sold. We sell such jars for 75c., and allow 10 per cent commission to the dealer when it is left for sale. This is considerably better than is usually paid for it by the barrel. We would respectfully refer dealers to the following list of subscribers who have reported.

Could you tell me who would pay cash for honey on receipt of same, or at Depot here. I wrote to the Chicago Honey Co., but get no answer. I will have over 1000 lbs. Basswood honey, I would sell at 14c.

R. S. BECKTELL, New Buffalo, Mich.

We have I should think a ton, perhaps more, at the present time of very nice honey.

M. D. MILLER, Peninsula, O.

11 colonies this Spring, increased *to date*, to 24, and extracted 885 lbs. honey. JOSEPH M. BROOKS, Columbus, Ind. July 20th, 1874.

FRIEND NOVICE:—My colonies (19) all came thro' winter in moderate condition. I have at date extracted 1000 lbs. honey (nearly all clover), for which I will take 18 cts. per lb. It is in wax coated barrels.

WM. HARRISON, Hopedale, O.

A. I. ROOT & CO., SIRS:—We have not been in the habit of giving our reports to the public, but if they will be of any service, we are pleased to do so.

We have this year four Apiaries which have produced as follows:

	lbs.
East of Oberlin 1½ miles, 55 stocks	1750
West " " 3 " 36 "	2100
Greenfield, Huron Co. O. 28 "	1400
Freedom, " " " 74 "	4200
Total	9450

We expect to extract about another barrel from our Apiary east of Oberlin. Most of our honey is from Basswood. We hold it at 20c per lb.

We are preparing to ship a car load from here to Henry Co. on the 28th of this month, where we expect them to gather as much during the fall as they have done during the summer.

NUNN BRO'S & CO. Oberlin, O.

OUR MEDINA CO. HONEY CROP.

Have increased from 32 to 80, and taken 2000 lbs. of honey. E. C. BLAKESLEE, Medina, O.

Have increased from 14 to 29, and have 500 lbs. of honey. WILLIS A. PHELPS, Medina, O.

Have increased from 35 to about 50, and have 4 barrels of honey; about 1500 lbs. of honey nett.

G. W. DEAN, River Styx, Medina, Co. O.

I have about 500 lbs. clover and basswood, mostly the latter, for which I want 18c.

JOHN WILLIAMS, Marr, Medina Co., O.

I have taken 53 gallons (about 580 lbs.) out of 20 hives, keeping some for box honey.

JOHN W. WHITE, Chatham Centre, Medina Co., O.

I have taken 4000 lbs. from 61 stocks, and have increased my swarms to 90 in number. All my hives are well filled with honey, more than I shall want for wintering. W. H. SHANE, Chatham, Medina Co., O.

I have made good use of the extractor I bo't of you. I have extracted 180 gallons (nearly 2000 lbs.); 80 from my own, and the balance from my neighbors. Price 18c in bulk, or 20c retail. I have also 150 lbs. box or cap honey. I could have taken a good deal more extracted had I not waited for box honey. My better half thinks we have found the land of Canaan, which was to flow with milk and honey.

WM. PAYNE, Spencer, Medina Co., O.

We have about 500 lbs. of white clover and basswood honey which we will sell for 20c per lb. The bees do not seem to work much on hemp yet, if they ever do we will write you; we have our bees and hives and also a spring wagon all rigged to take our bees to the swamp when the time comes; our wagon holds 14 hives without piling any on top of others.

F. R. SHAW, Chatham, Medina Co., O.

I commenced extracting about the middle of June after Alsike clover blossomed. In three weeks I extracted not less than 1500 lbs. of clover and Linden honey of excellent quality. Price for honey is 16c per lb. I had last fall 35 stocks, lost none, they were all healthy when spring came. They are all Italians. I have increased them to 55 by dividing.

A. A. RICE, Seville, Medina Co., O.

The above foots up a little over 13,000 lbs. and yet does not include several who use the Extractor, who have not reported as yet. If every county would do as well, and we know of no reason why they should not, honey would be as common an article of food as butter, perhaps. We must confess to a feeling of satisfaction in receiving these reports. Most of the gentlemen named are busy farmers, and yet their bees were wintered almost without loss, although at least four of them used the Extractor last season as closely as they have this. Do you ask if there have been none who got no honey? Yes, but they have box hives and box honey, or rather don't have any honey at all, this year, while every one who has movable frames and an Extractor has had a good yield per hive.

About 20c per lb is wanted, unless it be friend Rice, who will doubtless dispose of his quickly at 16c.

Heads of Grain,

FROM DIFFERENT FIELDS.

A. I. ROOT, Dear Sir:—If Bee-keepers are as busy as we are this warm weather you will not hear much from them. We are writing from our extracting room where we keep one eye on the bees through the wire screens and use the other one to guide the pen.

We pride ourselves on a comfortably arranged extracting room. Our table is about 7 ft. long by 2 wide set right in front of the reversible wire screen window frame and has a boxed off apartment at one end big enough to hold the extractor and just high enough to let a 45 gal. bbl. under. We did try to have it arranged so that a little wooden boy (or similar device) would kick up his heels and notify us when the barrel was nearly full, and he didn't work worth a cent, so for want of time to get him fixed just right, we had to discharge him and rely on a gimlet hole bored so the honey runs out (just enough to notify us when the barrel is nearly full) and is caught in a pan.

We have used a Gray & Winder and other extractors but never had one to suit us so well as our old home made one, fixed over with your improved gearing and frame.

Our cappings drop through a hole cut in the middle of the table and are caught in a vessel set for the purpose.

We can attest to the usefulness of R. H. Dickson's frame racks, as we have four similar ones in use, on which we carry 14 or 16 frames as easily as 6 or 8 formerly. In regard to extracted honey—we will sell most of ours by commission put up in neat jars holding from ½ pt. to 2 qts.—some four or five sizes. We bought our glass ware at Pittsburgh from some of our old friends. Thos. J. Walton, Salem, O. got us up some labels of our own designing partly, at $3.75 per thousand. By placing the label at a distance, you will notice the advantage of the large letters in bronze.

Our apiary is laid out after your hexagonal plan, and we like it very much, being much the handiest arrangement we ever had. Our 115 Concord vines are growing beautifully.

We use a Langstroth frame from necessity, will probably continue to do so, although we would otherwise willingly conform to a standard, for we think the idea of Apiarians arriving at some degree of uniformity, an excellent one.

Our hives range from 10—12—14 to 20 frames, the latter of which we had adopted before the "Standard hive" articles appeared, as best suited to our use. We thought then that the 30 inch idea was large but it has been growing in our head and has not diminished since, for we now find it hard work to keep our 20 frame stocks from casting swarms.

Now I must tell you all I know of smokers. One of our visitors wanted to know on hearing that we burnt "Buffalo chips" if we "sent West for it?" That's just where we get it. After a dry spell we take our basket on our arm and "go west" to the barn-yard or pasture lot and fill it with chips. Those a couple of inches thick, sawed into strips, leaving each piece a couple of inches square, when dry are splendidly adapted to to the wants of the Apiarian. By pouring from the benzine jug a few drops it can be lit in a minute's time, will burn nearly all day, giving the best kind of smoke, and scarcely ever blazing unless caught by a high wind. We keep ours constantly burning while going the rounds, and it is then ready for use when we run across one of our hybrid stocks that want to go for the eyes. When one gives out we lay the coal remaining, on the end of another and thus keep the smoke going.

Our honey season still continues good and the honey is now nearly as clear as water, and of good consistency. We have taken over 200 gallons (and ready to go at it again) from 43 colonies.

We will have all our bees pure before long and hope to enter the field with good pure stock next spring, and not a black bee within several miles of us.

Possibly we may enter the $1.00 list next season for we like the fun of rearing Queens.

Please send me a few Queen Registers and find enclosed 25c. for same. Yours respectfully,

Indianapolis, Ind. June 28th. D. LYONS BROWNE.

I also have one item on early Bee Pasture which I consider of value, if you are of the same mind, you can publish it for the benefit of the Brotherhood. You are aware that in the West and East perhaps, growing of forest timber is becoming part of the farmer's occupation, and Maple is one of the kinds most used; now if bee-keepers will go into the plantations of young Maples and trim off small limbs, or wound in any other manner the trees early in the season, the sap will flow down the trunk of the trees forming a syrup which is excellent for the bees, comes when we most need it, no danger of drowning the bees and it will not injure the trees in the least.

JAMES SCOTT, Epworth, Iowa.

A very good idea without doubt, and the blossoms of these young Maples are also an important source of honey, when the weather is such that the bees can gather. Would not letting the sap run down the trunk be a wasteful way of doing it and would it not induce the bees to go out in unsuitable weather? you see friend S. we feel like a "burnt child" in regard to the latter idea. We would hazard the suggestion that it *might* injure the trees afterward, if we hadn't raised so many objections already, but we heartily advise planting forest trees by all means. Our 4000 Basswoods are looking beautiful now in spite of the abuse the grasshoppers gave them last season. We have just had them trimmed up and the ground spaded around each one and they are making a fine growth.

DEAR NOVICE:—GLEANINGS for May (the missing number) is at hand. A postal card is not half big enough to express my sympathy on; "I know how it is myself." Four years ago I lost almost all my bees—cause—late transferring. I am satisfied that you are right, that lack of pollen did the business. We are not ready for you to abdicate the editorial chair yet. If we can find the reason your bees stored no pollen, your loss may be more useful to us than Bolin's success. You say that for the last three years you have found but little old pollen in your combs in the spring. Is that not about the time that you have run the extractor exclusively, and fed up in the fall? Is it not barely possible that bees, when kept robbed with the extractor, in their eagerness to store honey for winter neglect to store pollen, except for immediate use? I robbed one stock last season of all their honey as fast as gathered; they gave me double as much honey as any other stock, and kept up the supply of brood, but as soon as flowers failed and the brood was all hatched I gave the *bees* to an adjoining stock. An examination of their combs to-day, shows them to be perfectly empty—no pollen—a fact I never noticed before. If we could feed pollen bad weather, all would go well. But if your system of extracting *all* the honey, and feeding for winter on syrup, makes us entirely dependant on an early spring for success, I think we had better "go slow" in this climate, where early springs are an exception. The fact that Bolin's bees were wintered on natural stores is proof to me that they also stored pollen.

I do not use the extractor as a general thing during the last half of July, and the first half of August, (the time Indian corn is in bloom) and when I begin again I find the combs half filled with pollen.

I think more of my bees than of any thing else I have, (wife and children excepted) and I tremble lest I lose them again. Bingham of Mich., I see has come to the conclusion that it is all *luck*, and I was always an unlucky chap, so you had better reserve a place for me in "Blasted Hopes" corner.

Heavy losses occurred in this vicinity this spring, chiefly from attempting to winter weak swarms. I lost three such, all the weak ones I had. My strongest swarms wintered best, though their combs moulded some, but they soon cleaned them. It is very unfavorable weather now for bees, cold—rainy—windy, and has been for two weeks. I had my bees in prime order for honey gathering—made some swarms the 26th of May—was raising some Queens—had thousands of Italian drones, and no black ones to speak of—had begun to "go" for some of the strongest a la Novice to prevent swarming, when this bad weather came on, cold as March. I have done all I could to keep my bees up, but they are killing drones, destroying Queen cells, throwing out brood, and cutting up Jack generally. If the weather don't change I will be put back to the 1st of May. "*Sich*" is bee-keeping. Yours truly, R. L. JOINER.

Wyoming, Wis. June 14th, 1874.

This is a new view of the matter we must confess, but it will hardly apply in our locality, for we seldom if ever use the extractor after the middle of July. Besides, box hives have gone the same way in many cases.

But there is nothing like ones own experience for a school; and I had one the other day. I had a swarm put into a hive containing 13 frames (Standard) and had it brought to me the next morning—they had swarmed out twice before and returned to old hive. There was a ¾ inch hole in each end of the hive for ventilation and I thought I would leave it closed until night for safety; and to give them something to keep them quiet, I laid a piece of comb honey on quilt and turned the corner up to give them passage. There was plenty of comb fastened in the frames. At night I opened it and they were like so many drowned rats, only a few bees in crawling condition and they were not so, very long. Well, that experience only cost me $3.00 cash, and a good deal more *chagrin*. But I will try to save a more valuable swarm some time. [Don't tell anybody what a novice I am.] E. HUNTER.
Manchester, Mich.

But we fear we shall have to tell it often, for some one is sure to "cut the same caper" every little while, during the warm weather. A new swarm is always so loaded with honey for their new home that they can bear very little confinement, and they have about as little need (for the first day) of honey in the comb, as of a work on mathematics to direct them in building their cells properly.

Are the *curved* end honey knives *of Winder's*, patented?

On July 6th, had *two* swarms of bees come off from *one old* stock, one at about 10 A. M. and the other about 3 *P. M.* I did not intend they should swarm, but they beat me in time. F. W. CHAPMAN, Morrison, Ills.

We should suppose not for if it is, the patent certainly cannot "hold." Quinby, first used and recommended knives with a curved point and they were described and advertised some time before the one you mention. Two swarms from one hive is not very strange if they were second and third swarms, but if the first of the season 'twould be rather unusual in one day.

My bees nearly all died two winters ago leaving plenty of honey, but are making up for it this summer. I have had 5 swarms from one, all good, and 20 lbs. box and 21 lbs. extracted honey thus far. Can't say what I may have yet. May the wind-mill continue to run.
A. V. CONKLIN, Waldo, Ohio.

What could I get for the yellow wax made into small cakes as stated in *A. B. J.* Vol. 7, page 133. It would be some work to cake it, but still if it would sell for what he thought it would, it would pay well. Can you give any information on the subject?
WESLEY BROWN, Homer, N. Y. July 10th, 1874.

Some time ago we made some pretty little cakes of wax with a loop of narrow scarlet ribbon fastened to each by pressing the ends into the wax before it was cold. The cakes were made by pouring it into small fancy dishes, they can be had very cheaply of the tinsmiths, they are called "patties." Now these cakes to be suitable for a lady's work box should not exceed ½ or ¾ oz. each, and they retail for 10c. As the French wax sold for this purpose is much adulterated, a pure home-made article would doubtless find a ready sale. The best way, as with honey, is to supply your home market first. Take a dozen or two made of nice wax, (that from the "cappings" is beautiful) to your merchant or grocer and give him a commission for selling, and if you are not careful he will soon be out, as we are at this minute; we haven't a single cake left with the "scarlet ribbons."

Do the Rocky Mountain bee plants *Celome integrifolia* and *Leophanthus anisatus* yield fodder for cattle, or honey only? H. A. S.

We believe, nothing but honey. If we are wrong will some one please set us right.

We have no Vetches but can get you some if you wish, they do not amount to anything in this climate. it is too hot. B. H. STAIR & Co.
Cleveland, O.

The above was rec'd in answer to an inquiry from us, sent them in April.

In using the "Standard Hive" for box honey would you advise putting boxes *in* the ends of hive or on top of frames? O. L. BALLARD, Malone, N. Y.

We think the most comb honey would be secured by taking out frames as fast as filled and sealed in either the back or front of the hive; taking care that they had clean new comb for the purpose that had not been used for brood rearing.

Please tell me through GLEANINGS the best way to remove the bees from the comb before extracting. If you ever told us I don't remember of seeing it. The Italians stick awful tight don't they?
ALFRED MCMAINS, Chariton, Iowa.

Provide a bunch of Asparagus tops composed of three or four stalks as thick as a lead pencil, and with broad bushy tops. Some fine annealed iron wire cut in pieces six inches long, is handier than strings for tying them together. and they are to be tied in the middle of the top as well as where held in the hand. After shaking off as many bees as you can, take the brush in the right hand and roll it so as to roll the young bees off before the entrance, and they will crawl in safely. If your brush gets smeared with honey, rinse it off in a pail of water. It may be used until so dry it breaks up.

We now rejoice—or rather we feel doubtful over 73 stocks of bees. Sweet clover, as well as their watering place covered with the busy little fellows. We have just been giving one contrary swarm instructions not to build their combs across the frames as they were doing. D. P. LANE, Koshkonong, Wis.

I think more than one half the bees in this country died in April for want of supplies. It rained all the time so that they couldn't get out. Blooms were abundant through the month. I found out in time that mine were dying and saved them with syrup.
W. F. LEWIS, Baldwin, Miss.

If *we* could save our bees by simply feeding them we should be quite happy indeed.

We cannot imagine such a case as the lack of pollen. we generally think we have too much; I have cut out whole sheets of it but I won't do so any more. Bees are doing splendidly here, I have taken out 840 lbs. so far, some of it, perhaps 300 lbs., was from the fruit bloom. It is not pleasant to the taste and very dark. clover is fine and we had a fine shower Sunday that brightened things up very much; some of my hives filled the upper story in four days, you seldom see it better than that. H. E. CURRY, Cin. O. June 2nd.

Bees in this locality have been doing but very little good. I lost 4 colonies out of 6 in the last season, and 4 out of 8 in '73. Had half changed to Italian and have lost them all. They cannot stand the cold weather that we have in this part of the world, and all that have perished for me, were very rich in natural stores. hoping to have better success in future, I am, yours truly, S. H. SMITH. McKeesport, Pa.

We think friend S. you are a little hasty in deciding that Italians are less hardy than blacks; such sometimes seems to be the case in a few instances, but taking the general average where conditions are equal and we believe the reverse will be found the rule. Where Italians are not given sufficient room they often prevent brood-rearing by filling the hive completely with honey, and under such conditions they are insufficient in numbers when winter comes to keep up proper temperature, and of course must perish. Was not such the case with your own? The extractor is almost the only remedy for such troubles.

FRIEND NOVICE:—Those eggs came to hand after 60 hours from the time you mailed them, but the comb, box and all was pretty much smashed fine; still I have from one end of it, where there was a cell or two which was not smashed down to the base, two larvæ hatched, but no Queen cells found over them as yet. Now I want you to put me up some more as I direct: On the morning of the 24th of July put a nearly new worker comb in the centre of the brood next where your imported Queen is. Look at it on the morning of the 25th and if there are eggs in it send them to me by the first mail on Monday the 27th of July. Now how to put them up: Make a box of wood ½ inch thick. Make it three inches square by two inches deep. Have the top or cover go on with screws so as not to jar the comb. Now go to the hive and get the oldest eggs in the comb above mentioned, cut out a piece two inches square and wrap it up in soft paper so you cannot see a bit of comb. Put ⅛ inch of cotton wadding in the bottom of box, put in comb and tuck in wadding on each of the four sides, then put in wadding until box is full. Screw on top, and send. Please excuse us for becoming teacher to an older member of the bee-keeping fraternity, for we have faith that if the eggs are put up so they will not jar we can hatch them, for since we sent you for the eggs just received, we have placed a frame of worker eggs in a hive and and had them hatch all right, after they had been left in our shop away from bees, *eight days*. You ask on your card if we are certain that eggs will hatch after being kept a month. We will give you the facts. In using our small hive described in *A. B. J.* we sometimes get drone brood in boxes. On finding such we set them out, thinking to spoil it and left them out in one instance nearly a month, and then put them in the hive again and to our surprise the next day but one found plenty of larvæ in the boxes. We now take precaution to see that the eggs are hatched, and then we can set them out a day or two until the brood suffers when all will be right unless the Queen lays in them again.

The poorest season so far, we have ever known. Our hives will not average 3 lbs. of honey in each at date. Cause, cold and wet. Basswood just opening and we are hoping for better times.

G. M. DOOLITTLE, Borodino, N. Y. July 18th, 1874.

P. S.—In the comb of worker eggs referred to above the bees only hatched those that would hatch in 24 hours. The rest were all cleaned out.

No excuse is ever needed friend D. for presuming to teach us; our capacity for taking in instruction is boundless, and we will faithfully perform our part of the experiment so long as there is any hope of success. When we are desired to send the comb in such wooden boxes, as are described we shall have to request that about 10c. additional be sent.

The following is just at hand. Our opinion is that the whole secret is warm weather. Such as we invariably have in July for instance.

Hurrah! Off with old hats and new. We have two fine Queen cells nearly ready to seal, out of our two larvæ, hatched from the comb of eggs we received from you all smashed up. Our heart went down to our boots when we found that the bees had taken all the larvæ out of the comb we had away from the bees 8 days, and we expected our imported larvæ had fared the same; but we really have two fine Queen cells from them. G. M. D.

A. I. ROOT & Co.—There now, you have told on me for losing my *two hundred and fifty hives of bees* last spring, but I do not mind that so much since you did not tell the fact that I lost near *four hundred* colonies the previous spring and near *two hundred colonies* the spring before that, not leaving me *five per cent* of my stock each time. I started with 17 hives this spring and now have 80 good colonies from them besides taking fifteen hundred pounds extracted honey, and now I will give any of those who *know* the cause of, and remedy for the bee malady, two dollars each to ensure all my good colonies to live over until next May, and I used to winter so safely that I would not give 20c. per hive for insurance. Two thirds of the bees in this region have swarmed and perhaps one half of them have made some box honey. Clover was entirely gone July 1st. Basswood we may say commenced yielding that day and lasted until the 9th.

R. WILKIN, Oskaloosa, Iowa, July 16th, 1874.

From seventeen to *eighty*, and 1500 lbs. of honey is certainly ahead of us friend W., but we think you mentioned having purchased Queens for them, in a former letter. If Basswood only lasted *nine days* with you, we are certainly ahead here, if we are not a Basswood country; we have had almost three weeks and considerable is gathered yet from occasional trees that blossom late.

FRIEND NOVICE:—Our 100 colonies have increased to 125, mainly by natural swarming, and that notwithstanding all the opposition I could bring to bear, short of extracting the honey from the breeding apartment, which I did not wish to do, as I wanted all the box honey I could get. Bees obtained more honey than usual from fruit blossoms, but the yield from white clover is comparatively light in this section, owing to the clover being badly winter killed, and also injured by drouth. In many places bees obtained just honey enough to keep them breeding and swarming, and where they were permitted to swarm at will the yield of surplus honey must be light. A friend told me he knew six swarms to issue from one of his stocks, and he did not know how many more came out and went to the woods.

I only permitted my colonies to swarm once, with the exception of one which swarmed twice, consequently they were full of bees when Basswood bloomed, and worked on it accordingly. All of my old stocks, with one exception, and many of the swarms are at work in surplus boxes. I have from 6 to 22, 4 or 5 lb. boxes on each. I have taken off a few hundred pounds and there are more ready to come off as soon as I can find time to attend to it. But most of the boxes are not quite ready to come off yet, as the honey is not all sealed up. Bees are beginning to work on the second crop of red clover where it was cut early; and if drouth or the grasshoppers do not use it up as they did last year, I hope for a fair yield of honey, notwithstanding the unfavorable spring. The one old stock that has not worked in surplus boxes was the weakest I had in the spring. It has become quite strong, but I have kept it as a kind of reserve upon which to draw whenever I want a frame of brood or honey for any purpose.

Honey seems to be thicker and heavier this year than common, as boxes that seldom contained more than four lbs. hold almost five. The dry weather evidently had something to do with it.

All of my old colonies have too much honey in the breeding apartment; many of them twice what they should have, and it will have to be extracted after that in the boxes is sealed up. I do not wish to do so now, as I have found by experience that extracting much out of the breeding apartment during the working season always detracts from the box honey.

JAMES BOLIN, West Lodi, O. July 20th, 1874.

We must say friend B., that we are disappointed in your report. We had fixed our opinion on having you report at this date about 10.000 lbs of extracted honey, or 100 lbs. to the colony on an average, and here you have been allowing your 100 stocks to "fool away their time" (begging your pardon) on box honey. Of course, you may know best. Our bee-keepers here, who brought their stocks through in any kind of shape are making a good yield with the extractor, but taking an Apiary through, they would not get one fourth the amount in boxes, so far as we can learn; and yet the prices are constantly quoted in our Cleveland papers at nearly the same. Thick, well ripened, transparent honey, is rapidly making for itself a market at a price but very little below box honey, and if you do not report at least 6000 lbs. of box honey we shall think you have erred in *summer* management, whatever may be your skill in wintering. There! we'll stop now lest some one may think our 2½ barrels of honey and 45 colonies, are making us "sassy" again.

Out of fifteen colonies all of which came through the winter in good condition, I lost eleven in the month of April. I had set them out on the summer stands about the 15th of March, and during the long cold weather that ensued, the hives not being shaded from the sun shine, the bees would fly out and become chilled and be unable to return. Before I was aware of the fact I lost eleven. Others in this vicinity have been equally unfortunate; one man lost forty colonies, about all that he had. **Wm. Caldwell**, Elmore, O.

My bees are doing splendidly so far this year, I started the season with 17 and now they have increased to 35, all natural but 4, and still swarming every day. Mine are all Italians but 2, and they have not made a move in that direction yet. Black bees about here are doing nothing of any account, and several have complained that the worms are destroying them all. Mine are the only Italians within about 15 miles of here. **E. A. Sheldon**, Independence, Iowa.

Whatever the Blacks may do in early spring, Italians are certainly far ahead in the honey season.

You say on first page of July No. of Gleanings "Hives that have been destitute of bees ever since freezing weather **** may be considered safe." 32° F. is freezing, and to my certain knowledge a temperature of 14° will *not* kill the moth germs in a certain stage, but 8° or 10° will do it sure. This is not guess work but a fact known to me by actual and extremely careful experiment. Hives were kept air tight after an exposure of 14° and were nearly destroyed.

Yours respectfully, **James Heddon**.
Dowagiac, Mich. July 1st, 1874.

We thank you for the correction, and acknowledge our error. We only knew that combs kept in tight hives over winter in our barn were never troubled, but if placed there when taken from the hives in warm weather, there was sure to be trouble.

My opinion is, the large hives will be no remedy for the common malady in bees; with me large colonies fare full as badly as small ones. Scarcity of bee-bread may have something to do with it, yet I think but little. My bees had badly failed long before breeding had ceased; almost all my hives had bee-bread left. **R. Wilkin**, Osealoosa, Iowa.

I put six stocks of Italians in cellar last fall, after extracting all natural stores and feeding sugar-syrup. They all wintered well, but found one Queenless this spring; united it with another stock and they have done well. Made five new swarms three weeks since, raised fourteen Queens and have extracted 95 lbs. of honey at present writing; shall expect to get more soon. White Clover is abundant here now and Basswood promises well. You will see that I have no reason to be discouraged with bee-keeping.

E. W. Poole, West Richfield, O. June 29th, 1874.

1. Ought surplus receptacles to be put on or over a new swarm before the main frames are pretty well filled?

2. How do you manage to make the bees build their combs straight? You somewhere say we must watch and compel them to make their combs straight. **Stephen Young**, Mechanicsville, Iowa.

1. If our friend will excuse the liberty we would advise him to put his surplus receptacles where neither he nor his bees will ever see them more. So far as we know they rarely use them until the hive is crammed full of honey, and then they often lose another day or two of the best part of the honey harvest, waiting to think about it, and then about half the time conclude not to work in boxes at all. A couple of our neighbors who have used the extractor successfully for some years, thought they would try a few hives for box honey this season, but the sight of hives filled and ready to be extracted, with boxes untouched was more than they could stand, and in a trice they were emptied, giving both the bees and the Queen room; and now they labor industriously like the rest.

2. Have every comb built between two others, or between one and the side of the hive, and they cannot well be other than straight.

Dear Novice:—I have not for two years used any smoke at my home apiary where I open some of the hives daily in the season, and where all my children play as carelessly as if there were no such things as bees. Honey is so scarce during the last half of May, whole of June and July that I have to divide up my apiary into three or four; take them in an ordinary three-spring wagon and trot off on our smooth roads, as fast and as safely as if pleasure riding.

I never *could* use a feather, nor a wisp broom in brushing bees from their combs.

Plenty of good weeds usually abound, but I find an asparagus stem with plenty of small *limbs*, just the thing; these *vegetable* brushes do not make the bees mad a bit, in fact they soon get used to being brushed and will, as soon as they see the right kind of a brush coming roll off like peas. I have succeeded in replacing my last fall's number of stocks—51—by division, have all in tip-top order, ready for any thing that comes in the way of honey.

I put my bees in my cellar, in the fall, under the main living room of my house, ventilating very little, and have good success. I lost two between Nov. 15th, and March 1st, the day set out—starved—leaving two full frames of honey on the side of the hive opposite the bees. March was so cold, and April too, for that matter, that after a couple of day's flight, they could not be examined for three weeks at a time. The consequence was two starved, and four or five came out and found other hives. All my hybrids played that trick on me. They invariably left clean combs, with brood and sealed honey--showing their *cussedness*—of 40 pure Queens, not one would desert her hive.

I have to-day 7 frames full of brood, in each of upwards of 10 stands—and when we get so many in the *Quinby* frame, we may expect *some bees* one of these days, but there will be little honey for them until Aug.

June 22nd—Contrary to expectations, we are now in the hight of a wonderful flow of honey from *Sumac*--which of late years has not yielded much. Every thing in the hives is filled full and I am kept busy hiving swarms, as it has become too much of a job to keep them from it by removing frames of brood.

G. F. Merriam, Topeka, Kansas.

We would be glad indeed to learn that the spring swarming out, belonged only to hybrids, but we believe the full bloods are sometimes quite guilty of the same trick. As a general thing weak colonies seem to be the ones most addicted to it, but there are many exceptions to this rule that are hard to get over.

Sudden yields of honey often come quite unexpectedly and from a variety of sources, therefore, 'tis always well to be ready to take advantage of them. Give the Queen room at such times at all hazards, and this can only be done with the extractor. When our present basswood yield first opened we tried giving the Queens empty combs of which we have plenty, but even when we gave a colony two, in the evening, they would be filled with honey before she could more than fill a circle three inches in diameter.

Oh Novice! Can you believe me when I tell you that I am going to have at least three Queens from those eggs—such is likely to be the case I assure you, for there are three nice cells started and I can see the young brood in the jelly at the bottom. The eggs did not reach me till Thursday. I think they came as far as eight hundred miles. **A. McMains**.
Chariton, Iowa, July 10th, 1874.

Very glad indeed to hear it, and perhaps if we could always be sure of having such beautiful warm weather as we have had during this month, we might send them 1000 miles or more. The above piece of comb if we remember correctly, contained eggs just laid in a piece of comb containing bees just gnawing out. If we cannot manage some way or other, to give all our readers the benefit of the Italian bees without such enormous expenses and failures as *have been* the rule, we shall think *we* are a failure in one respect at least.

WILL a few, please remember that our subscribers are all regarded as equally our friends and we can in no case show any partiality in favor of any particular one. Several have written us very pleasant letters asking us to send just one queen before its regular turn; this would be wronging others and their need is often just as great. Again, others when we have become somewhat acquainted, ask us to deviate from our regular rates of "cash with order" for our various implements. Unless we show partiality we cannot do this; besides, should we we do it, losses would inevitably occur, and our prices in future must be raised sufficiently to pay these losses; the result being that *those of our customers who are paying cash in advance without a word of complaint, would be obliged to pay the debts of those who plead for a little time, and then neglect to pay. Is this right or proper?* Of course you all answer *certainly not.*

Now please don't think hard of us, if we make no distinction and require all to conform to our established rule. Bear in mind that our sales are made of many small amounts, and our customers often hundreds of miles away. It seems hard and rude we know, but some of the very cleverest friends we have among our correspondents, are often slowest pay, and perhaps they can't *get* the money; we don't know.

We desire to supply our friends at the very lowest possible figure, and we cannot do this safely unless we have cash with the order.

Half a teacupful of bees, sent *with* the comb of eggs, would doubtless make a sure thing of it, but if we do this, would it not be best to send a Queen also?

Queens reared from imported mothers, and fertilized where Italian drones are the rule and not the exception, are now sent for *one dollar.*

Our bees seem to prefer fresh, to salt water.

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal for	$2.25
" The National Bee Journal "	2.25
" The Bee Keeper's Magazine "	1.75
" The Bee World "	2.25
" All four, The Bee Journals of America	5.50

Books for Bee-Keepers.

SENT postpaid on receipt of price.

Langstroth on the Hive and Honey Bee	$2.00
Quinby's Mysteries of Bee Keeping	1.50
Bee Keeper's Text Book, muslin,	.75
" " " " paper,	.40

Good Books.

These, though not specially designed for Bee-keepers, have a tendency to inculcate principles that ensure success in bee-keeping as well as almost all other rural pursuits.

The first on the list should be in the hands of every one who has planted grape vines to shade the hives, as we have advised.

Any of these books will be forwarded by mail, *post-paid*, on receipt of price.

Fuller's Grape Culturist	$1.50
Fuller's Small Fruit Culturist	1.50
Fuller's Strawberry Culturist	.20
Fuller's Forest Tree Culturist	1.50
Henderson's Gardening for Profit	1.50
Henderson's Practical Floriculture	1.50
Tim Bunker Papers	1.50
Ten Acres Enough	1.25
Roosevelt's Five Acres too Much	1.50
Art of Saw Filng (Holly)	75
Window Gardening	1.50

Averill Chemical Paint.

THE *ONLY* RELIABLE.
THE *MOST* BEAUTIFUL.
THE *MOST* ECONOMICAL.
THE *MOST* DURABLE.

Requires no oil thinner or drier,
Requires no waste of time in mixing,
Has stood *eight years' criticisms*
With *yearly increased popularity*
And *yearly increased* sales.

Is sold by the gallon only, in packages of from 1 to 10 gallons each, in Purest White and any Color or Tint desired.

Address, for sample card of colors and price list,
Averill Chemical Paint Co.,
Office and Factory 132 & 134 East River Street,
CLEVELAND, OHIO.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

J. Shaw & Son, Chatham center, Medina Co., Ohio.
I. E. Daniels, Lodi, " "
G. W. Dean, River Styx, " " "
W. J. Hosmer, Janesville, Minnesota.
Dr. J. P. H. Brown, Augusta, Georgia.
E. C. Blakeslee, Medina, O.
Willis A. Phelps " "
The two above, rear all from an Imported Queen.
W. D. Wright, Knowersville, Albany Co., N. Y.
J. H. Nellis, Canajoharie, Montgomery Co, N. Y.
R. S. Becktell, New Buffalo, Mich.
C. R. Williams, Milan, Erie Co, O.
H. Nesbit, Cynthiana Harrison Co., Kentucky.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

J. H Martin, Hartford, N. Y.
Geo. T. Wheeler, Mexico, N. Y.
R. S. Becktell, New Buffalo, Mich.

In order to hasten the introduction of the STANDARD Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground	$2.00
Twenty frames for above 5¾ c. each	1.15
Sample Frame, by mail,	10
Quilt	40
Or all complete except painting, for	3.50
The same in a bundle including nails, hinges etc.	3.25
Extractor made expressly for Standard frames, (Comb frame 14¼ wide, by 10 deep.)	$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

ILLUSTRATED JOURNAL A magnificently Illustrated Monthly, with **Chromo** $2.50 a year. Send **10 cts.** for sample copy, or **30 cts.** for sample Chromo, terms to agents, etc. **Canvassers Wanted,** in every town, county & State. Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

SCIENTIFIC FARMER A Richly Illustrated Monthly, $1.50 a year, **Chromo** free to annual subscribers. On trial, three months, **25 cts.** or with Chromo, **50 cts.** Sample copies and terms to agents sent on application.
Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

PLEASANT AND PROFITABLE EMPLOYMENT, for male or female, in every city of the Union. Active persons can double their small investment every day. Inclose STAMP for particulars to
THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

THE BEE WORLD.

OUR Bee Journal of the Southern States. Issued monthly at $2.00 per year. Sample copies free.
Address A. F. MOON & Co. Rome, Georgia.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpareil space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,	$6.50
Two " " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross,	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,	19.00
Labels for above, " "	.65
The same with printed address, per 1000	4.25

I shall have on hand and ready for shipment from the 15th of June, a large lot of 1 and 2 pound square flint (white) glass honey jars. They are of the same style as my other jars, which are by this time well enough known.

I shall sell 1 lb. (white) flint Glass Jars per gross $8.00
2 " " " " " " 11.00

In lots of 10 gross or more, the same as the others, 50 cts. less per gross.

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

UNCAPPING KNIVES.

As good as any.

Each	.50
Per doz	$4.50

For further particulars, Address,
CHAS. F. MUTH,
1tf Cincinnati, O.

BEE-KEEPER'S SUPPLIES.

We can furnish everything needed in the Apiary, such as Italian Bees and Pure Queens, Honey Extractors, Knives, New System and Champion Hives, six styles, Bee-Feeders and Ventilators, Bee-Veils, the American Bee-Keeper's Guide, 244 pages, paper cover, 50 cts.; bound, $1.00; Wax Extractors, $3.00; Alsike Clover Seed, Black Spanish Chickens, &c. Send for our large illustrated PAMPHLET, containing information for Bee-Keepers, FREE to all. **E. KRETCHMER,** Coburgh, Mont. Co., Iowa.

ITALIAN QUEENS.

From an Imported Mother.

Sent as soon as fertile, for $1.00 each. Tested, and warranted to produce three banded workers, also safe arrival guaranteed, each.........$3.00

Also, full colonies in Langstroth hive, tested Queen from imported mother with stores enough to winter.........$15.00

My Queen mother is from the Nunn importation mentioned elsewhere. E. C. BLAKESLEE, Medina, O. 7tf

Italian Queens by Mail.

THIRTEEN years experience. After August 7th, will send Queens warranted pure etc., for $1.50 each. H. ALLEY, Wenham, Essex Co., Mass.

DISSOLUTION AND REMOVAL.

The firm of BALDWIN BROS. is dissolved by mutual consent, the same to date from Nov. 1st, 1873.
L. W. BALDWIN,
A. A. BALDWIN,
P. BALDWIN.

The subscriber, having removed to Missouri, will continue to breed choice Italian Bees and Queens from the best stock that can be procured. Purity and safe arrival guaranteed. No circulars.

Prices:—Single Tested Queens, $3; Two for $5. Six or more, $2 each. Address L. W. BALDWIN,
Wellsville, Montgomery Co., Mo.

FOR 50 CENTS we will send **The National Agriculturist,** a large, live, 16-page illustrated family paper, six months on trial, or with large first class chromo *Flowers of Paradise*, 15½x21 inches, for $1.00, and extend the time six months free to agents sending subscribers, besides large cash commission or premiums. **The Bee-Keepers' Magazine,** same terms. Terms to Agents sent free. Address **H. A. KING & CO., 75 Barclay Street, New York.**

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

QUINBY'S NEW SMOKER.

ALL who expect to manage bees successfully, will want the best method yet devised of using smoke. By putting old rags, rotten wood, or other material in a tin cylinder, and working a small bellows with one hand, smoke can be directed to any point, in quantities to suit. Price $1.50. Sent by mail in two parts $1.75. Send for circular and price list. 7tf
M. QUINBY, St. Johnsville, Montgomery Co. N. Y.

BEE-KEEPERS, ATTENTION!—Send 25cts. for three months' subscription to NATIONAL BEE JOURNAL, now published and edited by
ELLEN S. TUPPER, Des Moines, Iowa.
Liberal terms to Agents. Specimen number free.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address
DR. J. P. H. BROWN, Augusta, Ga.

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular. Wm. W. CARY,
1tf Colerain, Franklin Co., Mass.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume 1, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital
and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO.

BY A. I. ROOT & CO.

Vol. II **Sept. 1874.** **No. 9**

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke.*

Bee-Keeper's Magazine. *King.*

National Bee Journal. *Mrs. Tupper.*

Bee World. *A. F. Moon & Co.*

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

◆

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to Conduct an Apiary.......................97
Getting ready for winter.......................97
Our Own Apiary.......................98
How to make Colonies.......................98
Great number of Queen cells.......................98
Introducing Virgin Queens.......................99
Brood or Eggs for Queen Rearing.......................99
Primary Department.......................100
Transferring.......................100
Capital needed to start an Apiary.......................100
Out door wintering in "Long Hives".......................100
Letter to Novice.......................101
Two story versus Horizontal hives.......................101
To prevent honey candying.......................102
Editorial.......................102
Page.
Straw hives.......................102
Our universal Feeder.......................102
Italians and Red Clover.......................102
About our Clover seed.......................102
Honey Column.......................103
Last appeal for box honey.......................104
Two story double width hives.......................104
Heads of Grain.......................105
"Luck" in wintering.......................105
Color of Imported Queens.......................106
Starch for Bees.......................107
Davis' Transposition Process.......................107
Introducing Queens.......................108
What to do with the sugar.......................108
Sryup in the spring.......................108

NEW ADVERTISEMENTS, AND SUNDRY OTHER MATTERS.

OUR coffee sugar costs us $10\frac{5}{8}$.

MRS. TUPPER'S Journal is now consolidated with the *A. B. J.*

WE have for several years purchased Honey Jars of Fahenstock Fortune & Co.; see advertisement.

THE BEE WORLD has not as yet made its appearance for August, nor has any reply to a postal card of inquiry.

WHILE 'tis only an occasional Bee-keeper, in an occasional locality, that succeeds with box honey, we think we are almost safe in saying that *any one* can succeed in getting extracted honey in almost *any* locality.

HAVING procured some neat wood mailing boxes at a low price, we will send comb containing *very small larvæ* from our imported Queen, securely packed for 25c. If the weather proves favorable, they will generally produce good Queens. Eggs we consider almost a failure.

THOSE who want a tested Queen from Imported stock *without delay* had better send to Frank Benton. See advertisement. Those who order dollar Queens *must* wait until their turn comes, and orders are tod-ay, Aug. 27th "way ahead of us."

WE are pleased to call attention to the fact that the Quinby Smoker is now made *without solder*, and since the new postal law, is sent by mail for $1,60. Mr. Q. personally superintends their manufacture and is ready to add any farther improvement that may be advisable.

OUR neighbor Dean, of River Styx, has sent *four* more Queens to Klum, of Sherman, Texas, and all were received alive, and are now safely introduced and laying. After the trials friend K. has had in getting Italians he feels as though friend Dean should "go up to the head."

WE have many times thought it strange that N. Y. City could not afford a Honey House capable of disposing of any quantity that might be offered, and are now pleased to note that Mrs. S. E. Spaids has located there and offers cash on delivery. See advertisement. In our Nov. No. of Vol. 1, Adam Grimm speaks quite favorably of the lady's promptness in business.

LAST fall we advised using wire cloth over the top of the hive, to keep the bees in when housed. We were not then aware that very neat straw mats were made for the purpose; these also answer excellently for absorbing all dampness, and permitting the air to pass slowly from the cluster, thus avoiding a draft, but still giving ample ventilation. See advertisement. Samples can readily be sent by mail.

OUR friend Dadant, it seems is succeeding so well in importations this summer, that he reports having received 15 live Queens out of a lot of 16. Since friend Nunn's imported Queens are all sold, we shall have to refer inquirers to Dadant's advertisement for the balance of the season. We feel like thanking them for reducing the price so low as $10.00, and but 9.00 when two are taken. 'Tis an easy matter now, to have all complaints of impurity at an end.

WE find that it is many times difficult to obtain small tinned or galvanized tacks for fastening on the Queen Register Cards etc., and have accordingly procured some that we can mail for 10c per paper. To indicate the year in which a Queen was hatched 'tis only necessary to drive one of these tacks opposite the last figure of the current year outside the circle of figures indicating the day of the month. Thus: all Queens reared this year will have a tack driven opposite the figure 4; then next, the figure 5 and so on. If a Queen reared this season fails next, we will pull out the tack and drive it opposite the 5.

WILL some of our inventive friends please bear in mind that in making improvements on hives, 'twould pay them well to know first what has already been done. As an illustration, a subscriber sends a hive by express, that, judging from his letter, has cost him much time and study, yet it is precisely the straw hive recommended in Quinby's book many years ago for wintering. The chances are great, nowadays, that you are only wasting your skill and ingenuity on something already well known. *Patents* are often granted we well know, but when it can be shown that the *same thing* has been patented before or has been in use years ago, of what avail is the patent?

IN our last, we mentioned that orders for $1 queens were nearly all filled, but since then we have had so many we fear they cannot all be filled this season. One of our Southern friends at least, Dr. J. P. H. Brown, Augusta, Ga., is doing a good work. In one case we know of his having sent a second queen gratis in place of one found dead on arrival. We consider this a free gift on his part, for an Italian Queen is certainly worth $1.00 without any expense of mailing, postage etc., and we cannot afford to make good any of the losses, always liable to occur in the Queen traffic.

AT least *three* of our friends should be more careful to read the conditions under which $1. Queens are sent. The first sent for one but she was lost in the mails, the second received the queen but she was dead, the third was advised that his queens would probably be sent within a week, but we fear 'twas three weeks or more, when he *demanded* his money or bees, and as the order was in the hands of a neighbor several miles away who only gets mail twice a week, 'twas some time before we could restore "harmony." Now according to agreement, the first, as soon as he learned the Queen was lost, should have accepted it as his risk and his loss, also the second; and the third should, if he preferred, have pleasantly requested his money returned if the Queens had not been shipped. There seems to be considerable misapprehension in the matter; we are *not* making money out of the dollar Queens as yet, and our friends should bear in mind, that we furnish them more from a desire to disseminate the Italians than for profit. When we furnish Queens reared from Imported stock, especially is it difficult to make them pay at the price after all expense of caging, postage etc. etc., and we really cannot stand a lengthy correspondence in the matter. The remedy is simple, send *three* dollars where you expect safe arrival and purity guaranteed.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. II. SEPTEMBER 1, 1874. No. IX

HOW TO CONDUCT AN APIARY.

No. 9.

ONE year ago we said, "in time of peace prepare for war" and we say so again now, but really, with less confidence in our ability to direct *what* preparation is to be made, than we had then.

So far as dysentery is concerned, we have no fear at all but that it is perfectly under control, but the dwindling away, and rapid depopulation of the colonies in the spring, is a matter which we fear is almost beyond our skill. From great numbers of reports, from widely scattered localities we find that some Apiaries winter just as well as they used to years ago, colonies dying only from starvation, while within a short distance at a neighboring Apiary they may all die. These results come when the circumstances are so widely different, and where almost every kind of treatment has been given, all the way from box hives out doors without care, to movable combs, Italians, and honey extracted until frost comes, that we think we are excusable for thinking it an epidemic among bees that appears in some Apiaries and not in others; and for which we have as yet no positive remedy, for the box hives have failed in one case and those which were extracted came out all right, and the next report would be right the reverse.

Mr. I. E. Daniels of Lodi, this Co., purchased several colonies and moved them late in the fall after all pasturage was over. A part of them with the rest of his colonies were left out, and a part put into his cellar, yet all died about alike, while his neighbor a few miles away, from whom these were purchased, *lost none*. Is it not rather probable that some disease used up friend D's Apiary? His colonies were remarkably strong in Sept., when we examined them, and he has hitherto been a most careful and successful Apiarist. Again, the honey that apparently *killed* the bees in '73, wintered them successfully in '74, see pages 22 and 58, current volume.

Now it is certainly poor encouragement to be told our bees may all die in the spring *whatever we do*, but facts are stubborn things. Nevertheless we are by no means to fold our hands and give up; strong colonies through this trouble, as with all others, have almost uniformly been the ones, if any, that came safely through the siege; we are to bend our energies to the work of making all good.

P. G. says she could take *one* colony and build it up strong, arrange the stores just right, and fix it up so she *knows* 'twould winter either in doors or out; how many of our readers feel the same way? If they can do one, why not fifty? Is it *time* only that is needed? If such be the case 'twill probably be a better investment of this precious time, to go to work now, this month, and if conscious that we have too little nerve or energy to put our whole Apiary in "apple pie" order at once, perhaps we had better take one at a time, and make believe for the time being, 'tis our sole possession.

Now the question comes up as to what is to be done, that is, what do we know from past experience etc., can be done safely; not in an experimental way, (manure etc.) but established, that all or nearly all will agree on.

Suppose our readers stood about us, and we pointed to a colony, and addressed them something after this fashion:

"Fellow laborers can you all agree on what shall be done to put this colony in good shape for wintering? How many bees shall we have? Is there one of you now, that would be satisfied with a pint, a quart, or even two quarts? The hive contains ten Langstroth combs, if we bring brood if necessary from other hives, (thereby reducing the number of colonies) until at least seven of the ten combs contain brood, and bees enough to cover them nicely, will it be too strong this first day of September?"

We think the majority of you will agree that it will not; and also that 'twill be just as well to leave the brood in its natural position. If honey should come in during the fall we can put empty combs at one side or above them, to be used in the extractor.

In regard to the amount of stores needed, you will all probably agree that if the brood combs are all bulged out above the brood with sealed stores, and the other three full and heavy with pollen and sealed stores also, that they have an ample supply.

Uncapped watery looking honey, you will all admit is not to be considered desirable. *We* shall use sugar syrup in place of honey, and it will have been fed to them principally during the month of August; during this month we shall also feed enough to keep up brood-rearing briskly, and shall move the combs about but little; leaving each colony all the pollen they have gathered and just in the position they have placed it.

If after we have fixed everything the best we know how, they should die, we can console ourselves with the thought of having done our duty at least, and that bee culture is not the only pursuit having its drawbacks, by any means.

OUR OWN APIARY.

To-day, July 30th, after getting our August number all safely in the Post Office—we always feel as if we had got the washing done and ironing too for that matter (as the women say) when they are all printed, addressed, wrapped, and tied in their respective bundles—well, after this was all done, as we were saying, we repaired to the Apiary which had been for about three days pretty nearly running itself. Now before telling you of the wonderful sight that met our "optics," we shall have to remark that our friend Dean had just one week ago to-day, brought, us a box of bees, to be exchanged for brood from our imported Queen. Well, we took out three combs, and cut the eggs out of the centre of each—D. only uses eggs for all his Queen-rearing—and then just for fun we put these three combs into an empty hive, and after filling it out with seven more containing stores only, we poured the bees he had brought, in front of the hive, and straitway had a fine colony, for he in his generosity had brought about a *peck*. These bees he had obtained from different hives and as he had hastily shaken them from the combs, of course they comprised all ages. Now the big wonder we have been so long trying to tell was, that we counted on these three combs, Queen cells to the number of—to be exact, Novice found *fifty eight*, but P. G. only made it forty nine, but 'twas nearly night, and she says she skipped some that weren't good ones, "as if she could tell by the looks of the outside," Novice says. Well as part of them are very close together we shall get out our "conservatory hatching machine" and then we'll tell all about how many good ones there were.

Aug. 3rd—Yesterday was Sunday. That is one fact; another is that it was the tenth day since our mammoth lot of Queen cells were started. In anticipation that something might happen to make Sunday work necessary to save them, about a dozen hives were located and furnished with combs late Saturday even'g. About half past five on Sunday morning, Novice arose put on a *clean* pair of linen pants etc., washed his face and proceeded to wipe it and comb his hair as usual while he sauntered about among the hives and grape vines. After finding all on duty apparently as they should be, he proceeded to enjoy the tranquility of the early Sabbath morning by reading his favorite papers seated in the camp chair beneath one of the Lombard plum trees. It may not have been purely accidental, his having chosen a seat nearly in front of the hive containing the Queen cells; these he proposed examining a little later in the day, but intended to keep them until Monday if practicable. As he sat reading, his eyes wandered occasionally toward the entrance and finally to get a fair view of every thing brought out by the bees, he got the broom and commenced sweeping away the immature plums and leaves that had dropped about the hive. Suddenly he stops and ejaculates, "As sure as you're alive that is a dead Queen, and here's another." Away went the papers; one of the Queens that seemed alive was placed in the sun in a cage. and then the hive was examined. A fine Queen was parading the combs and perhaps a dozen cells were torn open, or had the lids hanging. Four Queens were found "loose," two of which were fighting; like friend Grimm of old, he tumbled these a yard apart in the grass, and the other two were put on separate combs, which were carried to new hives, bees, brood and all. Our bee house stove was wheeled out, the tin Simplicity hive with hollow walls, mentioned a year ago, was placed upon it and the lamp lighted. In this the two combs containing the cells were placed, after shaking off the bees, and four more nice Queens were found scattered about, after all was done. In fact Novice soon began to examine every bee found crawling on the ground, thinking it might be a Queen. Five more Queens were hatched during the day, and as fast as they hatched they were given to nuclei hastily extemporized by placing three combs of hatching brood, bees and all, in one of the new hives, or given to Queenless colonies. Toward evening to dispose of the last one a black Queen was killed from one of our natural swarms, and the young Queen placed almost the same instant on the same comb she had occupied. To-day we find her all right and no Queen cells started. Is not that a simple way of introducing? The whole operation scarcely taking three minutes. With the Simplicity hives we frequently open the hive and find the Queen in *one minute.*

To- day about a half dozen more have hatched, and we have increased our number of stocks to 54.

Aug 4th—Sixteen more fine strong active Queens have hatched, and we have 61 colonies, and more Queens that we know not what to do with. We could very easily turn them into dollars if they were fertile, but the problem is to get bees to care for them until this be accomplished; we have already gone further than we intended increasing, and begin to fear we may not be equal to the task of making all strong for winter. We find ourselves often wondering if it be really possible that Queens just hatched can *really* be put safely in any colony of bees, without any bother of caging.

Our experience has been for the last three days, the same as last year, that Queens hatched *without bees*, can be placed in any Queenless hive, *under any circumstances* with impunity. As they have seen no *other* bees, they at once hasten to those presented them with perfect confidence, and this confidence is seldom a mistaken one for the bees receive them with a manner that seems to imply, "Well, she *must* have been hatched in our hive, for how else could she get here in that shape?"

Aug. 7th—As our colonies now number sixty eight, we think it is about time to stop, and direct what skill we are possessed of to *keeping* what we have. For the past two days our plan of making colonies has been something as follows: As soon as a Queen is hatched in our nursery we proceed to any full colony, and lift out the comb containing the Queen; then with thumb and three fingers of each hand, we lift out at once three combs, brood, bees and all, and carry them gently to a new hive. After dropping the newly hatched Queen on top of these frames among the bees the swarm is made, and we have only to put empty combs in both hives until they are full again.

This process we had repeated so many times, we began to think failure impossible, but when we began to draw on our *black* stocks for bees and brood we were disappointed in finding two Queens in front of the hive, dead. This was passed over as a small matter, until to save the Queens that kept hatching, we killed our three remaining black Queens and gave them the young ones as usual. The whole three were found in front of the hive dead; three more were given them and one of them was soon walked out with a bee on each side of her, holding each a wing. We returned her caged, the first caging we have done for weeks. If this is another unfavorable trait of the blacks, we shall assuredly endeavor in future to "run our Apiary" *without* their assistance. Again, the black colony that we requeened so expeditiously on Sunday to save a fine Queen, was found all right Tuesday and no cells started; she consequently had been allowed full liberty of the hive for 48 hours or more, yet to-day, she too, was found dead in front of the hive and a host of cells started. Is it possible they did not discover the "swap" we had made until after two days or more? We think we shall have to try *them* with a Queen cell to-morrow, yet we decidedly prefer the "Lamp Nursery," as there is no cutting of combs at all, and no loss on cells, be they built ever so closely.

The following just at hand shows we are not alone in the field.

> I have succeeded in introducing 27 out of 30 virgin Queens; three of them by caging. Over 20 were introduced by letting them run into the hive at the entrance, just as soon as practicable after hatching. Such as hatched at night were introduced in the morning.
>
> Two years ago, I introduced a fertile Queen by letting her crawl into the entrance after night, the next morning she was laying eggs; this is the only fertile Queen I ever introduced in that way. You know bees from different hives can be united much more readily after night than in day time.
>
> T. G. McGAW, Monmouth, Ill.

Aug. 10th—Our 68 all have Queens, defend themselves fully from robbers, and everything goes finely. The four black stocks have accepted their unfertile Queens with one exception, and we gave them a Queen cell. Yesterday being Sunday we had leisure to watch our young Queens as they took their flight (we never open hives on the Sabbath unless in a case of positive necessity), and we were rejoiced by seeing several take wing with a vigor and ease that dispels any fears we may have had about so many cells in a hive giving all strong and vigorous Queens.

As the yield of honey has about ceased we have been feeding all colonies having laying Queens, from one half to a teacupful of syrup every evening about dusk. The way in which we do it is described on another page. We have decided not to commence out-door feeding so long as no bees molest the groceries etc., as we have so many other bees now in the neighborhood.

Aug. 14th—Is it not really provoking. Our big lot of young Queens are all safe in hives, and the greater part of them laying, yet we felt so sure that some of them would be lost, we started another comb for cells, to replace missing ones, and now we have once more large fine Queens, hatching and no place for for them. Our friends who have sent us their "dollars" for Imported daughters, doubtless think we might readily fill their orders, which we would with alacrity, were these laying Queens. If some one will tell us how we can get them fertilized with the ease and certainty, that we hatch them in that same "lamp nursery" we shall feel as if they had divulged to us the whereabouts of a small gold mine on our own premises. Three frames of brood and bees will it is true, convert them into laying Queens in 8 or 10 days, but really we dare not draw on our other colonies more this season. We might also sell those just commencing to lay and thus make a place for them, but we dare not even do that, for fear of marring our prospects of successful wintering. This morning we debated seriously what to do with three remarkably large and yellow ones just hatched, and finally made three more colonies for them, into which they crawled as if they owned it all, and "nary a bee" dissented by word or look.

Now we are going to give the result of our experiments in regard to

BROOD OR EGGS FOR QUEEN REARING.

Our friend Dean, always uses the latter, and advised us, if we wished good Queens, to get a new empty comb built perhaps half way down, and insert it one day in our Imported Queen's colony. When it was supplied plentifully with eggs, to remove and give to a Queenless stock having no other brood, thus obliging them to commence with eggs; such Queens hatching in sixteen instead of 10 days. Now we did just this, *two days after* starting the lot for the 58 cells, noting results carefully.

The large lot were started by the bees at different times, but the first of these hatched on the morning of the tenth day. Those hatching on the first two or three days, from large nice cells were large, and tolerably light for imported stock but some of the last to hatch were very black and small, though quick and active. We have saved several of the latter for experiment, but mind you, we do not propose to sell any of them. Another thing, in none of the large lot did we find any jelly remaining in the cells, but this could hardly be expected with so many.

About one dozen only, were started in the comb with *eggs only*, but they were swimming in jelly as soon as the larvæ were visible to the naked eye; a day or two after, more cells were started over pretty good, sized larvæ, half grown perhaps, these have not hatched but the first constructed produced the yellowest Queens we have ever reared from the Imported stock, and they are larger limbed and strong, though not so quick and active as yet, as the small black ones mentioned heretofore. We shall keep a record of course—we can do it easily with our Queen cards—of the longevity of these respective Princesses.

Aug. 19th—The great loads of orange and yellow pollen that come in, in the fore part of the day, more especially the hives that contain the daughters of our Imported Queen, call forth admiration from every one, from Blue Eyes up, and as nothing prevents our peeping into the interior as well, we are happy to say the young Queens are faithfully doing their duty, even the dark inferior looking ones as well as the rest. Notwithstanding quite a severe drouth, under the stimulus of our liberal feeding, every egg seems to produce a perfect bee, in a way we don't remember seeing before.

OUR PRIMARY DEPARTMENT,

Or First Principles in Bee-Keeping.

[Designed especially for the veriest novices, and those who know nothing of bees whatever. Conducted by a fellow Novice of several years experience replete with blunders, as well as with occasional successes.]

A GREAT many *commence* bee-keeping but too often end in a miserable failure in a year or two, and some times in a few months or perhaps *weeks* even. Now as we can't tell how many of our readers may do this, and we particularly desire that you should *not* fail, we shall endeavor to make our list of implements for a beginner as brief and simple as possible. We have for this the twofold reason that we wish to avoid all confusion, and also that as few "traps" as possible may be needed and consequently be lost should you abandon the enterprise.

We rather prefer that you should commence with one hive, but if you can't be satisfied with so small a beginning, just double or treble the following amount.

Stock in trade absolutely necessary for a start in bee-keeping

One swarm of bees 5 to $10.00 estimated	$7.50
Simplicity hive	1.00
10 frames @ 6c	.60
Quilt	.25
Transferring clasps, one package	.25
GLEANINGS IN BEE CULTURE	.75
	$10.35

We would say it needs just about a $10.00 bill to make a modest trial in the business.

"But," says some one of our readers, "you are continually calculating on our being able to judge for ourselves what we need, when the fact is we know nothing at all about it.

"The hive at $1.00 has no bottom, and how do we know what is best to set it on; also, you have said nothing about paint, yet we think you have somewhere taught that they should never be exposed to the weather without painting. Still again, you say the Italians are much more docile than the blacks, if so why not give us the Italians at once, and then our increase, without any more or *as much* labor in fact, if we are to credit you 'bee folks,' will be Italians and all the more valuable. We certainly don't want to waste our time on inferior stock just to save a little additional expense in the beginning. Come now; tell us just what you would do, should some friend tell you to start him an Apiary, and if you thought one hive sufficient, all right, but it is to be all complete; the amount, to be entrusted entirely to your own skill and judgment.

"Now remember your besetting sin, of economizing too closely in bee matters, but take all the money you want. If we mistake not you have decided not to give a beginner the Standard hive?"

"We certainly would not. Their first lesson should be increase of stocks rather, and after some experience in that business they can decide for themselves whether they prefer to lift their ten frames into a long hive with capacity for twenty, or simply set on another story."

"Well, here is your heading on this paper now put down the items and figures."

OUTFIT FOR A BEGINNER.

Simplicity hive	$1.00
One extra cover to serve as a bottom-board	50
Three good coats of Averill Chemical paint	50
Quilt	.25
Ten combs, mostly worker, @75c each	7.50
Italian Queen from Imported mother	3.00
Four quarts of bees @$1.00	4.00
GLEANINGS IN BEE CULTURE Vol 1 and 2,	1.50
	$18.35

"And is the above all?"

"All for the present."

"Of all the various articles mentioned on your price list would you add none?"

"None else until the article is really felt to be necessary by the owner."

"And the above is sufficient to build up a large Apiary without any additional purchase of bees?"

"We think so. If all Queens are reared from the one mentioned there can be nothing poorer than half bloods, this will serve to give a new strain of blood and they are very good to handle usually, and are nearly equal to pure Italians as honey gatherers. When this Queen fails another tested one should be used. In an Apiary of 25 stocks or upwards an Imported Queen will, we think, be a profitable investment."

Those who have, or find it more convenient to use the box hive and common bees, we would refer to the articles on transferring in former number, see pages 33 and 64, Vol. 1st, and page 49, current volume.

It will require considerable care and skill to transfer a colony in mid-summer or fall, as well as to transplant the grape vine out of season, yet it can be done if you particularly desire it.

If you fail, it will probably be because you are careless and not neat and tidy about your work. The bees will assuredly pass readily into anything in the shape of a hive if it occupies the precise position of the old one and contains some of their brood combs. Two principle difficulties beset beginners; First, daubing honey around so that robbers get "a going," secondly, losing the Queens. Some deft housewife can instruct you better how to avoid the former than we can, and in fact handling honey in almost any shape seems to be decidedly feminine work, but you should before hand give her a clean nice place, free from rubbish etc., in which to do the work. Bees are decidedly the neatest and most orderly class of all animated creation—bless our stars we meant to except every time and *always*, these same feminines—and if you wish them to thrive you must make their habitations (we mean the bees) agreeable to this trait. The Queen cannot get lost unless you leave some crevice or hole for her to crawl into, therefore we repeat our injunction, to bank all around the new hive with clean new saw-dust, pounded down hard, so that a bee may travel over it easily. Now if you make it a point not to kill a bee during the whole operation, you certainly will not kill the Queen.

Very likely they may in their fright, crawl and cluster in several places about the new hive, instead of going in at the entrance, but this should occasion no uneasiness for if the majority pass in, the rest will all follow in due time, like a flock of sheep. We would locate the old hive while transferring, just back of the new one, but so close to it that the young bees will crawl readily to the entrance on hearing the hum of their companions. Use plenty of smoke in commencing, and you will find them as peaceable as flies when their old hive is removed from its stand.

OUT-DOOR WINTERING IN THE "LONG HIVES."

FRIEND NOVICE: Several of my friends having asked my opinion in regard to wintering bees out of doors, in New Idea Hives, I will now endeavor to answer them.

That they can sometimes be successfully wintered in that way, I have no doubt, as in certain seasons they seem to winter well under all circumstances, and in almost all conditions. I should hesitate about advising any one to try wintering many in that way until the system has been more thoroughly tested. That some have been successful in wintering their bees in that way one or two winters, does not prove that they will always be equally so. The winter of '71 and 72, one of my friends wintered his 25 swarms on the summer stand and did not lose any, although that was one of those "blue" winters for bees. He tried the same way the next winter and lost about half of his stock, and the rest were so reduced as to yield but a small return the next season. Such may possibly be the luck of those who try out door wintering in New Idea hives.

It has been asserted that strong stocks wintered out of doors in the "New Idea" Hive, consume no more honey in proportion to the number of bees than they do in cellar or special depository. Such may be the case in some localities, but all my experience and observation, in regard to wintering strong stocks out of doors, have been different.

My father has kept his bees for over 25 years in a house built on purpose. It is boarded up outside with half inch, and ceiled up inside with matched inch lumber, with six inch dead air space. It is divided into rooms two feet square and they are about seven feet high. The bees never swarm, become very strong during the summer, and generally gather a large amount of honey, but owing to their numbers, and exposure, it frequently takes all or nearly all they collect to carry them through the winter. He never gets as much honey from one of his swarms, as I do from the most of mine. If he could put them in some moderately warm place, it would no doubt save a large proportion of the honey they consume during the winter, but with the thermometer at from 20° to 30° below zero, the ground freezing to a depth of 2 or 3 feet, two thicknesses of boards and one air space are but a slight protection, and the bees must consume honey or freeze. Owing to the wide air space, which they have to pass in going out, the bees do not fly out as soon as they do out of common hives, during warm spells of weather during the winter, yet large numbers of them perish every winter, and by spring they are no better than my common swarms wintered in my bee house, whilst they consume at least two or three times as much honey. Now, I cannot see why New Idea Hives, with one fourth inch air space, will give any better protection than father's house, with six inch air space. The large number of bees will generate considerable heat, but they will produce no more than they will in the house.

But while I would not advise any one to risk trying to winter many of their bees out of doors in New Idea, or in fact any other kind of hives, in preference to putting them in some warm place, before they have tested the matter, yet I would not wish to discourage any one from making such hives, for so far as I have tested them, they give good satisfaction, for summer use. This is more especially the case where the extractor is used, for they are certainly handier than the two story hives for that purpose. And aside from the inconvenience in handling them, and the space they occupy, I can see no reason why bees in them cannot be wintered in-doors as well as those in common hives. And if we can winter strong stocks in them more economically in-doors than out, their size should not keep them out. A horse takes up more room in a stable than a pig or chicken, yet few object to stabling him on that account. As the swarms are stronger, the temperature of the room in which they are wintered must be kept lower than it should for common stocks, and they must have plenty of upward ventilation. That is all the difference required in the treatment in wintering, and the saving in honey will more than repay all the trouble, even if it takes two men to carry them in.

In the fall of '72 I had a number of two story hives on which I had used the extractor, and as the Queen had been breeding in both stories, the hives were full of bees almost to overflowing. On the approach of winter I put them all in the lower story, gave them plenty of upward ventilation, put them in the house with the rest, and they wintered as well as any stocks in the Apiary. Last fall when I put the bees from double width hives in single hives, I neglected to give them the proper amount of ventilation, and consequently more of the bees died, and they consumed more honey than the ordinary stocks, but in other respects they came through in good condition.

JAMES BOLIN, West Lodi, O.

LETTER TO "NOVICE."

FRIEND NOVICE:—As you request, I will make you a report of my Apiary for 1874 up to this date (Aug. 5th). I began the season with 48 colonies, 31 of my own wintering (all Italians) and 17 of blacks bought this spring in box and Quinby hives. The Quinby hives have been more trouble, and less profit to me than the boxes. I have increased to about 70 colonies I guess, but shall cut down to 50 of my choicest Queens before going into winter quarters. I have taken, up to this date, I think some over 4500 lbs. of ext'd honey, and 500 lbs. of comb now off, and almost ready to come off. About 700 lbs. is from fruit and Whitewood blossoms, and the rest all Basswood, and the heaviest and brightest I ever saw. This has been a poor season with us. The drouth has been so severe in this immediate vicinity, that corn is not ⅓ of a crop, and potatoes nearly as bad. We shall lose the Buck wheat crop for honey at least, though it yields an abundance of pollen. I shall look for 2000 lbs. of honey yet from Bone Set and Golden rod. I mean ext'd of course, *or* 150 lbs. of comb if you think I had better "go for comb honey." I could have had all my 500 lbs. off now, if I had let the *forty five hundred* slip from me. I have used 22 of the "New Idea" one story hives, with from 20 to 30 combs about 10x13 and have come to the conclusion that *combs* and not Queens *are the basis of an apiary*, and that I prefer the two story hive for the extractor, as well as comb honey in frames or boxes. I can get more honey from 30 combs and two or three Queens, than from 30 combs and one Queen. The three Queens don't have to be *horse whipped three times a day*, and live much longer than the *"long idea" Queen*. I have the lumber drying for 30 double story hives, and have 32 "New Idea" hives for sale, at *less than cost*. Combs cost, well say from 50 cts. to $1.00 each, and Queens 10 cts. each or *less*.

JAMES HEDDON, Dowagiac, Mich.

In answer to a query as to wherein the long hives were defective, we rec'd the following:

> I have tried 22 "New Idea" hives in every way possible for the extractor, and find out that bees are bound to store the surplus ⅔ of *every* comb full, when strung out horizontally, but not so with two stories; they will then store in upper set of combs almost entirely.
>
> J. H.

We have not observed the trouble mentioned above, but our experience has been limited to one hive only. We want further reports on the matter. Friend Whitson who writes the following, seems to have succeeded with them. It was written when acknowledging the receipt of a double wall, four foot hive that we had made for him:

> I have just got my bee house done, and filled the walls with dirt, but I would be glad to never put a bee in it if I knew they were as safe out-doors. Something that will wait a week while we cut hay and then stand out-doors at 20° below zero, while we sit by the fire, is what we careless ones *must* have if we ever make it pay. Yes, I must tell you that my bees were so nearly played out last spring, that I only transferred one to the Standard; that one gave me 100 lbs. honey in 20 days and 20 lbs. since, and no one of the rest did more than half as much.
>
> J. J. WHITSON, Valley Mills, Ind.

A. A. RICE, of Seville, this Co., has used several of the 4 foot hives this season and says he gets *three times* as much honey from them as from the 10 frame hives.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS
MEDINA, OHIO.

Terms: 75c. Per Annum.
For Club Rates see Last Page.

MEDINA, SEPT. 1, 1874.

FRIEND NEVIN's report of the Catnip Field is crowded out.

IT is just fun to make colonies, rear Queens or build combs even during a drouth, if you can afford the *sugar*.

BEE WORLD is to-day (Aug. 28th.) at hand. Loss of first copy was probably caused by the burning of a large amount of mail matter.

IF empty combs are worth 50c each, we really think they can be profitably made during warm weather in the fall by feeding; 'twould keep the bees in fine condition besides.

G. W. STINEBRING, Shreve, Wayne Co., O., is blackmailing the Bee-keepers of his vicinity by threatening them with suits at law, unless they pay him $5.00 for the right to use the *American Hive*. Hadn't they better take a Bee Journal?

THREE different persons it seems, have struck upon the idea of making frames of a single strip of wood, bent in shape by steaming the corners after having cut V shaped grooves, nearly through, where the bends come. We have not as yet been able, by this means, to make so firm a frame, nor one that will remain as perfectly square, but others may be more successful.

ANY one who doubts that Italians work on red clover should pass a small patch of it as we do now, half a dozen times daily. They have been busy on it about a week, and the colony belonging to the oldest daughter of our Imported, is building comb and slowly filling it with what appears to be clover honey. We removed their feeder a week ago as they seemed deter-since mined to build combs under it. They have grown from 3 frames of bees and brood only, June 23d, 'tis now Aug. 29th.

A NEIGHBOR left some jars of honey at a grocery where they stood all winter side by side with our own. While the latter candied and oozed out around the top of the jars, so much so in fact that they had to be carried away finally; the former remained on the shelves clear and clean, all winter. When we applied to them for their valuable secret, the lady of the house laughingly said 'twas all because we didn't know how, and finally said theirs was put up precisely as canned fruit. The honey was heated nearly to the boiling point, by suspending it in a tin pail in a kettle of boiling water, then poured in the self-sealing jars and the lid screwed down instantly.

ALTHOUGH we shall pay all postage on GLEANINGS for 1875, the price will still remain 75c. To our friends who have so warmly aided in increasing its circulation, we tender sincere thanks. That the task of obtaining a club, for almost any periodical is no light one we are well aware, and we have many times thought 'twas easier earning our money by regular days' works, than by urging people to subscribe for something they were not sure they wanted. We are always willing and prefer to pay for such services, and where your time is limited you can aid us much by giving us the addresses of such of your friends as you think likely to engage in Bee Culture; we will send them sample copies with pleasure, and will also thank you for your aid in increasing our list.

STRAW HIVES.

A. I. ROOT & Co:—In answer to your inquiry about the straw hives described in my book, allow me to say that they are not equal to the old-fashioned, conical shaped straw hive, and for movable frames, but little superioa to boards; not enough better to pay expense of making. A straw hive without frames, so that the combs are attached to the outside walls is superior for wintering in the open air, as has been proved for centuries. Straw disposes of moisture readily. When combs are in frames and there are spaces between the edges and sides of hive, the bees do not feel the influence of outside warmth readily, and suffer during protracted cold weather. The thick walls ot our hive, have proved insufficent during protracted severe weather, for the same reason, when the colony was too small to generate warmth to counteract outside cold. Yet they are a great advantage in ordinary winters.

M. QUINBY, St. Johnsville, N. Y. Aug 19, '74

We intended also to inquire about straw mats for the top of hives. Will Mr. Q. please give us his experience with these?

ABOUT OUR CLOVER SEED.

A. I. ROOT & Co.—Sirs, As I have been a regular subscriber to GLEANINGS since its first start, I think it due to me to mention in your column on humbugs, that last spring a year ago I sent money to Novice for Alsike Clover to sow about one acre, I received the seed and sowed it and lo and behold! it turned out to be all the old fashioned red clover. Please explain.

SAMUEL MUMMA, Highspire, Pa.

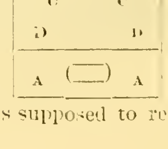
But we don't put folks in that department friend M. until we have first submitted the matter to them to determine whether the trouble was only a mistake they may regret more than any one else, or an intended fraud. The seed you mention was raised by a neighbor, and was advertised as containing a small quantity of Timothy seed, but was offered at less than the market price. One other report mentions that it was a *considerable part* red clover. Now if you, and others will send in your bills for seed, trouble, etc., we will remit at once, and thank you for reminding us to use more care in buying. We will in future test our seed by sowing a sample in-doors.

OUR UNIVERSAL FEEDER.

That a daily accession to the stores of a colony is absolutely necessary to its fullest prosperity, we are so abundantly satisfied since the experiments of this season that we take a real pleasure in recommending the following simple device:

Make as many bags of stout coarse cotton cloth (such as is required for quilts) as you have hives; these bags should be about 10 inches long and 5 deep, and the upper edges around the mouth are to be tacked to the under side of a strip of half inch board, $1\frac{3}{4}$ wide and as long as the top bar of the frames, or so long as not to allow bees to come up at the ends of the feeder.

To use it, remove one frame from the hive next the side where the lid opens, and push the edge of the quilt down to make room for the feeder as in the accompanying diagram:



The figure is supposed to represent the top of a Simplicity hive made to contain ten Standard frames. A, A, represents the strip of wood that holds the cloth bag and the oblong hole cut through it is to allow of pouring in the syrup handily from a coffee-pot. C, C, is the quilt with the portion that usualy covers the space occupied by the feeder A, A, turned down over the frame next the feeder, along the line D, D. If we wish to stimulate brood-rearing simply, raise the cover of each hive, as you pass along, enough to allow the nose of the coffe-pot to deliver a half a tea-cupful, or more safely into the bag, and close the hive and so on with the rest. If you wish to fill up rapidly for winter, pour in larger quantities of thicker syrup, and fill again when empty until they have the desired quantity. If you wish it all taken down quietly, feed only *between sundown and dark*; at any time in the middle of the day 'twill make what we call a "row" in in the apiary. In regard to speed we will only say that two of us, with each a coffee pot, can feed 60 colonies in five minutes. You will observe that if the quilt closes every crevice as it should always do, no bees can get in the way at all. 'Tis true there is danger (if fed rapidly) of comb building in the space not filled by the bag, but this we avoid partially by moving all the brood combs to the opposite side of the hive; if they should have seven of the nine combs containing brood, you can interpose two that do not, between it and the feeder. To work rapidly you will need to have your tinsmith cut the strainer from the coffee pot that it may pour thick syrup easily. These feeders cost almost nothing, and when not in use, 100 or more can be packed away safely in a single Simplicity hive.

Now then if your bees are not fed up for winter when this reaches you, our advice would be to set about it at once, and give them enough. If you keep up brood-rearing briskly during this month, we think it can do no harm. Take the inside out of your extractor, and fill it with syrup, and you have it in a very convenient shape to replenish your coffee pot from the molasses gate. With this institution you can get beautiful combs built almost as rapidly as you can ask, if you are willing to furnish the sugar.

We can only say in regard to boiling the syrup that there is an editorial disagreement in the matter; Novice insisting that 'tis just as well to put a half barrel of sugar into the ext'r and pour on boiling water, and he backs up his position by a host of sucessful experiments; P. G. on the contrary stoutly insists that good syrup cannot be made without boiling. As Novice is willing to admit that boiling "will do no hurt" those of our friends who agree with P. G. perhaps had better do so; at least if they will feel better satisfied about it. Should the bees gnaw holes in the feeder 'tis probably because your cloth is not sufficiently stout and heavy. We think nothing can induce such rapid brood rearing, aye, or comb building either, as regular, *daily* feeding; a colony may have unlimited stores sealed up in the combs, yet if no honey is coming in, either process will soon go on sluggishly. Should our bees survive the coming winter, we propose with the aid of this feeder to have some "tall" colonies next spring by the time fruit blossoms are out. Go make your feeders.

HONEY COLUMN.

IS there no way by which honey producers can get the full value of their honey or what the purchasers propose to give, without risk from irresponsible parties, and also that the purchaser incur no risk from producers sending an article less in amount and inferior to sample or description? It should be done some way by deposit of price, where conditions are agreed upon. Many more would ship, and many more buy, if they felt entirely safe from tricks.

R. Wilkin, Oscaloosa, Iowa.

An arrangement can usually be made with R. R. Co's to deliver the honey and receive the pay, but perhaps this would be only feasible with large lots.

I rec'd the extractor—have taken out 900 lbs. from 10 colonies—works well.

J. R. Pratt, Manchester, N. Y.

Have now on hand 500 lbs. comb honey, and 135 gals. extracted white clover honey from 44 stocks of hybrids and blacks, Season not good.

Theod. M. Moltz, West Fairview, Pa.

We have had a fair honey season here, but nothing extra. I commenced with 42 stocks; have increased to 75, and have changed Queens in 20 hives, losing some time in each. Boxes were put on 15 hives; from 20 the honey was extracted; the remaining 7 (the weakest) were kept busy comb making. I have now Aug. 8th, perhaps 150 lbs. of box honey, and about 3800 lbs. or nearly two tons extracted, and plenty of empty boxes for sale *cheap*.

J. H. Townley, Tompkins, Mich. Aug. 8th, 1874.

P. S.—The best yield from any one hive was 60 lbs. in four days, basswood honey, carried from one, to three miles. J. H. T.

FRIEND NOVICE:—I fear you made a mistake in quoting qt. fruit jars at 75 cts. for the retail price. If we go to the trouble of putting up our honey in jars, waiting for our pay etc. we surely should have 20 cts. or more per lb. for the brightest. I find that large sales of *ext'd* honey depend upon the efforts of the retailer more than any body else, and their *efforts*, can be had at about 20 to 25 per ct. commission; 10 per ct. wont purchase any more than "Yes, well, we will: we will put it in a conspicuous place" etc., etc. Say honey 3 lbs. @ 20 cts., 60 cts.; jar, if a good one, first cost 15 cts., commission 20 per ct., and you have 95 cts. Now take the other 5 cts. for bad debts, freights, candied honey, fire, and other casualties, labels etc. Your idea of putting honey on your nearest market is just my old way of doing it. James Heddon.

A. I. ROOT & Co.:—I had 40 colonies Italian bees to begin the season with; have taken 1800 lbs. extracted honey, all Locust and White clover—a choice article—weighs 12 lbs. to the gallon. Am selling at home by the pailful at 20c. per lb., in 2 lb. jars 25c. per lb.

The drouth cut short our honey harvest more than one half. I started out with the expectation of getting 4000 lbs. We have no Basswood and get nothing after 20th of July, and this year nothing after 25th of June. My neighbors who worked their bees for box honey have the pleasure of looking into empty boxes with perhaps a few pieces of comb started in one corner. I had one box hive that I intended to build box honey, but when the honey was being sealed to the bottom board, brood, comb and all, it was more than I could stand, so I "busted" the side off, took out the combs, extracted the honey and fitted them into frames. After honey failed I "hustled" all my old Queens off and now have all large healthy vigorous young Queens to "run the shebang". I never lose any bees to signify in wintering. Winter in cellar under living room—temperature 40° F.

J. A. Buchanan, Wintersville, O. Aug. 7th '74

A I Root & Co:—Gleanings comes to hand promptly every time, each one filled with good things, just the kind of information us beginners are in need of. Still it is not very gratifying to selfish human nature to read of your immense yield of Basswood honey during July, when our bees are not gathering enough outside of the *sugared floor* to keep them, yet we cannot complain, the yield of white clover having exceeded my expectation. The hives I extracted yielding on an average very nearly 100 lbs. I run three hives for box honey; it is not worth while to weigh as I don't care to know how small the yield is. But I do know some of the extracted ones gave me 150 lbs. each; one gave 70 in one week. I may get more surplus yet as we generally have a good yield of fall honey, the country being yellow with goldenrod after the middle of Aug. This is only my third year at Bee-keeping, and all I know I have learned by reading and observation, and no one to go to for information, for movable comb hives are as scarce as "chicken's teeth." I have about 1100 lbs. of White clover and 450 of Fruit blossom honey, and if I can sell this readily I will go deeper still.

C. H. Rue, Manalapan, N. J. Aug. 6th '74.

No. hive	May 30	Jun 11	Jun 21	Jun 27	Jul 3	Jul 9	Jul 18	Jul 25	Aug 4	Total each. lbs.
1	7¼	3¾	20¼	31½	35¼	53	52½	73	27½	304
2	7½	2½	12¼	26¾	37	36½	34	60	24½	242
3	6¼	4¼	18¼	32¼	43¼	44	31	90	27	296¼
4	0	2	16	23¾	19¼	48	38	65	18	229
5	6	4	19	44⅝	45¼	43½	35	60	13	270¾
Tot'l each xtng day.	27	17½	85¾	158¼	180	225	190½	348	110	1342
	Spring honey.		Clover and Raspberry.				Basswood.			

Average yield per hive 268 2-5 lbs.

Editor Gleanings: The above is what I have done this season with five, 32 (Kidder) frame, Gallup hives and Italian bees. As you perceive, bees did not gather much until the middle of June, the spring being very cold and backward here. The secret of large yields of honey is to keep strong stocks. I have just put division boards in the center of 4 hives and intend to have 9 swarms if they keep strong enough, as I gave them an entrance at each end of the hive. The division boards are perforated and covered with wire-cloth thus giving the two swarms the heat of one. I want 18c for my honey which is very thick and nice.

Wm. H. S. Grout, Poland Centre, Chaut. Co., N. Y.

Thanks for your very complete report. We fear we shall become converted to 32 frame hives, but from Quinby's report are we not at liberty to consider a two story arrangement of them, at least *equally* as good, as a horizontal? Is it not possible that the approaching hive is to be double width, and two story, whatever may be the frame? can no one furnish a report from a similar hive composed of 40 Langstroth frames? Kidder frame is 14 by 12 we think.

Be careful of wire-cloth on division boards, see page 74 July No.

FRIEND NOVICE:—I fear you will often have cause to be disappointed by my mistakes and shortcomings, since to err, you know, is human. But were you not "putting it on pretty thick" in expecting me to report 100 lbs. to the hive, which is, perhaps, nearly double the average amount reported in Gleanings for July?

We have less white clover this season than I have ever known, as it was nearly all killed last winter, and the same may be said of red, in this neighborhood. Two miles north of here there is considerable red clover and nearly all the clover honey we have came from there. However I will do the best I can, and if I fail to reach the standard you have set up for me, please don't, "view me with a critic's eye etc."

But is extracted honey really so much more profitable than box, in all places, and under all circumstances? With your permission I will give a little of my experience. Three years ago I had a pretty severe attack of "extractor on the brain" and determined to surprise the natives, by the amount of honey I would obtain from some of my bees. So in the spring I selected a number of my very best stocks, and as soon as they needed more room I put on the upper story, filled with empty combs, and as fast as they filled their hives with honey I extracted it.

Now for the result. The most honey I obtained from any one of them was 168 lbs. while several swarms that I let "fool away their time on box honey" yielded over 120 lbs. each; and from one stock that swarmed twice, and the swarms that came from it, I obtained 216 lbs. of box honey. I sold the extracted at 18, and the box at 25 cts. per lb. The account would stand about as follows:

216 lbs. box honey@25c	$54.00
168 " extracted " 18	30.24
Difference in favor of box honey	$23.76
or, adding value of the two swarms, $15.00 each	30.00
	$53.76

Now, in view of the above, I hope I may be pardoned if I am somewhat skeptical in regard to the advantages of extracted over box honey. Where the yield of honey comes with a rush, for instance, where it is nearly all basswood, I have no doubt the use of the extractor will prove most profitable, but where the yield is gradual, lasting a long time, as it generally does with us, I have, as yet, seen nothing to prove that the use of the extractor will yield most profit here, especially when we take in consideration the difference in the demand. Dealers come a distance of ten or twelve miles and take away the box honey, but the extracted I have to carry to them, and then find it dull sale. I believe in building up a home market, hence, try to furnish what there is a call for.

James Bolin, West Lodi, O. Aug. 12th, 1874.

There, friend B., we had suspected you of heresy before; however, we are content to let you work out your own reformation as the rest of the bee-keeping world are doing rapidly.

A I ROOT & Co:—I must say a word further in regard to what was called errors in judgement. I had said in circular that we had extracted 361 lbs in one season, from one hive, and over 200 lbs box honey; and intimated that even this amount might be exceeded. Part of such result was attributed to giving abundant room in the hive. Capt. Hetherington, Cherry Valley, N. Y., will reach this amount of box honey from a hive—I will venture to say, from 100 hives—this season. Mr. P. Elwood, Starkville, Herkimer Co., N.Y., had one stock last spring—in Quinby hive—the Queen of the family came from you. Began with eight combs. As the center ones became filled with brood, they were moved toward the outside, and the empty ones put in their place, till sixteen were full, on the bottom board; and then another course was placed directly over them, and the bees had increased to occupy the whole. No brood had been taken from them to assist others; neither did they have assistance from others. He commenced extracting before they had accumulated much, and kept the date of each time, and amount obtained—will give them at another time. I only remember the product of two days—57¼ lbs. In the aggregate, 502 lbs. I visited him Aug. 11th. Before that day he had taken 440 lbs. This was so extraordinary that I expressed a wish to see how much was accumulated since the last was taken. To accommodate me and some others present, he let us witness his taking 62 lbs. All up to that time was white honey, Buckwheat was just beginning to yield. What it will amount to is yet to be seen. The crop is promising, and usually amounts to half or two thirds as much as the white honey. It seems safe to estimate over 800 lbs. that this one hive will give in one season. The parts relating to what he already has, can be substantiated beyond dispute. When this amount can be obtained from any hive except one on this principle, I would like to know it; your readers would also.

M. Quinby, St Johnsville, N. Y. Aug. 21st, 1874.

Lest it might appear we had a position to defend, we will submit the question to our readers whether this great result is to be attributed to the hive, locality, their owner, or the queen. We are much obliged indeed to Mr. Q. for the reports, but we *really* should have liked with them, a report also of the rest of the Apiary. Capt. Hetherington has, or had, near 1000 colonies, and Mr. Elwood, as nearly as we can determine, about 200; what the rest did, and the general average, it seems to us should be given with the above to prevent mistaken impressions. Reports have been given in Gleanings nearly if not quite equal to the above, and with a diversity of hives. Is it not much due to plenty of empty combs and an intelligent——but stay; if the Queen came from us 'twas certainly a "dollar Queen," and Gallup, and some others, say that "dollar Queens"——*Why* can we not rear such Queens *every time*, and get such crops of honey from every hive? Truly perfection belongs not to bee-keepers, any more than to mankind generally. We gave directions for making a mammoth hive similar to the one described by Mr. Q., on page 37, Vol. 1.

Heads of Grain, FROM DIFFERENT FIELDS.

FRIEND NOVICE:—Mr. Martin is no doubt right in thinking I do not deserve much credit for wintering my bees without loss, as there are plenty of others that have done the same thing, and he *may* be right in thinking I may yet find my "Waterloo." Of one thing I am pretty certain, however, and that is, when it comes, if it ever does so, it will not find me with my arms folded, trusting to luck for success; but like Napoleon's old guard, in the field ready for the fight. But as I am not much inclined to cross bridges before I come to them, I will try not to borrow any trouble from that source at present.

Now to show friend Martin that it is not altogether fair sailing for bee-keepers in this section, I will mention that a neighbor living within 80 rods of me put his bees in the cellar last fall and *disturbed* them all to death before spring. Another put his three swarms in a cold out-building and only had one left the first of May, and they were not worth 25 cts. Of two other neighbors, one living one mile east and the other the same distance west, one had one swarm out of five, and the other three out of ten left. The above are the nearest neighbors I have that keep bees, and their luck is a pretty fair sample of the way bee-keepers have fared for some years past, where they were not properly cared for.

I never wintered more than one swarm on the summer stand. That was the first swarm I owned, and the amount of honey they consumed, and the number of bees that perished during the winter, determined me to try some other mode of wintering.

At the time, I was engaged in supplying the neighbors with what dry goods, notions etc. they needed, and when I talked of putting my bees in the cellar, many were the smiles exchanged at my expense. I might know how to sell goods, but bee-keeping was evidently out of my line of business. Well, the bees were put in the cellar, and in spite of all prophecies to the contrary, came out all right, and did the same each succeeding winter, until failing health compelled me to seek some employment affording more out-door exercise. A natural liking for bees, and the belief that there was money in them, indicated plainly enough what that employment should be.

On moving here, I had no cellar suitable for wintering bees in, I therefore built a house for that purpose, which has more than met my expectations so far, as my losses in wintering have amounted to almost nothing, whilst bees kept on the old hap-hazard plan are rapidly disappearing.

Now in regard to bees sometimes wintering well without any kind of care,—is it not generally owing to their being, by chance, in about the same condition, so far as bees, stores and empty combs are concerned, as a careful Apiarian would put them in, before winter? I have thought such was the case. It is seldom such chance work pays very long, for carelessness in any business is sure to bring its reward, sooner or later, and bee-keeping forms no exception to the rule. Carelessness is no safeguard against the "many varying circumstances" mentioned by Mr. Martin, and which I cannot help thinking it the duty of the bee-keeper to guard against. For instance; most of the bees that died last winter and spring were lost by the bees leaving their hives in quest of pollen or honey when the weather was too cold for them to be out, and as a consequence the old bees died before young ones were reared to take their place, thus leaving the hives bee-less, or nearly so. Now I think there is a remedy for this kind of loss. If I found the old bees were dying at a rate that threatened the safety of my bees, I should put them in the house again, feed them to set them to breeding, and keep them in the house until they could be put out with safety.

After bees have been out and had a purifying flight, they may be kept in-doors for some time with safety, and set to breeding by feeding. I have to see the first swarm yet that cannot be set to breeding, if put in a warm place, and fed.

In conclusion; Mr. Editor, just say to your farmer friends, who laugh at "Scientific" bee culture, that neither the extractor, sugar-syrup, or the Italians are the cause of the loss of so many bees; as I have all the above named "varying circumstances" and they have failed to kill mine.

JAMES BOLIN, West Lodi, O. July 16th, 1874.

I have observed that bees will store surplus honey in small hives more readily on a moderate supply, than they will in large hives, but the use of the extractor greatly modifies the rule and to my mind nearly annihilates the necessity of diversity in frames and hives. I am only making a start in bee-keeping for myself, but have handled, and can handle bees for others. I did what I think most others should do, I served an apprenticeship in a large apiary, and if some of your correspondents would submit to the same kind of discipline they would not need to ask so many silly questions and let everybody know it.

In a former number of GLEANINGS a subscriber wanted to know what to do.—wanted to examine his bees when the weather was too cold—*Novice* "did not know;" why *Novice*! I carry them into a moderately warm room—do it in any kind of weather. If my bees don't sing "Never mind the weather," I do.

Geo. W. Horner, Dubuque, Ia.

Now friend H. if we all followed your advice there wouldn't be any more novices. A letter is now before us from a lady, who has just been through her hives with the extractor for the first time, asking how soon she can extract them again; of course we replied pleasantly, "as soon as they are full again," and we hope our readers will not hesitate to ask anything they may feel disposed. We have tried taking the bees in doors to examine, but they had a way of getting around loose on the floor, and after somebody had stepped on them they were "all spiled" or as Blue Eyes would express it, "broke, broke, broke, real hard!"

FRIEND NOVICE:—I see a good deal said about "Quinby's new Smoker" as though he were the inventor of it. I have never seen it, but from description should think it the same as one Mr. Davis of Clear Water, Wright Co., Minn., tried to sell me seven years ago. It was made of tin, perhaps 2 inches in diameter and 8 inches (more or less) in length, with a folded seam like those in tin pans (as the heat melted these fastened only with solder) one end terminated in a small tube, to the other end was attached a small bellows, which could be readily removed when wishing to fill it. Who was the inventor I know not, he made them originally to kill lice on calves or ticks on sheep, with tobacco smoke, but when he went to keeping bees he used one of them to smoke his bees.

Have taken 56 lbs. of honey from 4 of my 5 swarms, all of which were weak in spring; will not extract from brood chamber this year and see if they will not winter better on early gathered honey. Wintered bees successfully when I ext'd only from top story.

S. ROWELL, Faribault, Minn. Aug. 2nd, 1874.

Thanks for the item. We see *B. K. M.* also mentions that combining the smoker with the bellows is not new. However, the most ingenious part of Quinby's is perhaps the arrangement of valves that open when it is stood upright, but close when laid down; so far at least, we believe Mr. Q. is entitled to credit.

We really hope leaving the honey near the brood may prove an advantage, but if this is all the trouble why have box hives fared so badly? We certainly should be sure that the bees have an abundance of well sealed ripened honey for winter, and where fall stores abound your plan will probably be best, say, after the 1st of August at least. We never extract after that time here.

Should not a *fertile* Queen begin to lay eggs immediately, on being placed with and received by a swarm of bees, after being caged with about a dozen workers 4 or 5 days? N. E. PRENTICE, Castalia, O.

She should lay within 24 hours at least, but before deciding, we would give them a good feed; *then* if she would not lay we would say "off goes her head."

You should have said in starting a colony with so few bees to do the work, "try to do as much of it as you can yourself." Keep them warm, fight their enemies, give them plenty of both honey and pollen. I built up a colony so last year, and two this summer. They consume an enormous quantity of pollen and should be allowed to fly *every evening*. One of these I found had a great many dead; I noticed too that the pollen had disappeared and gave more, and the mortality ceased immediately. These last I kept closed several days dreading robbers, but opened them all in the evening and swept off the bottom-board. The Sago tree commenced blooming about the 5th of June and bloomed freely about three weeks and still has some stragging blossoms left. Did your seed germinate? Have you any plants living now? I have never heard whether any one has succeeded in making them grow. ANNA SAUNDERS, Woodville, Miss.

Our seed, we are very sorry to say, did not germinate—not a seed. Perhaps we did not put it in a good place; in fact it is—*done up in the original paper, in a drawer at our elbow.*

We beg your pardon sincerely Miss Anna, and will plant some within the next hour. Can't say for the other folks.

In regard to the small colonies; we really doubt if they pay as a general thing. If possible we prefer to give them bees, and brood enough, that they may keep away robbers and gather pollen, almost immediately.

DEAR NOVICE:—Those Queens arrived so safely, and were so smart and lively that I must have another right away. I exchanged Queens with Mr. McMurdo, as mine was delayed. He said he would let me have his and take mine when it came; I felt almost sorry after I saw the one sent me, as it was the largest and lighter colored, those sent McMurdo being pretty dark. Hurrah for sending Queens by mail, and for those tin Queen cages.

ILA MICHENER, Low Banks, Ontario, Canada.

We have perhaps omitted to state that our imported daughters are dark; indeed, some of them just before fertilization can hardly be distinguished from common Queens, but after they are laying, they become much lighter unless it be the extremity of the body which remains dark, or as Dadant expresses it, of a dark leather color. The dark Queen mentioned above was daughter of an Imported Queen.

1. Is the statement true that Italians work on the red clover? We have no Buck-wheat for a fall crop, but the Astor is abundant, and I suppose as good.

2. Do you prefer hives one, or two stories?

3. Is it not better to give the same room laterally, than perpendicularly? That is, widen the hive till it will hold twenty frames in one story, and contract by close fitting boards in winter, to ten.

4. How many frames (Langstroth) are best for a full colony of Italian bees?

5. Is it best to keep the honey well extracted during the entire season? I have done that in some of my stocks, and they have reared *much* more brood than those where the combs have not been kept empty. Some advise me to keep the combs empty all through the season, even if I have to put the honey back in the fall.

I see by the copy of GLEANINGS you were kind enough to send me, that you make it your business to answer all the questions your correspondents ask you. That is the only excuse I have to offer for this long list of questions which I hope neither offend or weary you. I am going to take your GLEANINGS, and I hope that will keep me posted in future. I am a "Country Doctor," and have just time enough from my professional cares, to write an occasional impertinent letter, and attend to a few stands of bees. I made my-*myself* a honey extractor with a 12 gal. lard stand, tin, and the castings of a patent churn.

J. E. FRY, Lynnville, Tenn.

1. Most certainly they do, but not at all seasons. While we invariably find them on it working briskly in June, we seldom see them take any notice of it in the fall. Whenever the common bees are busy on white clover we rarely fail to find the Italians busy on the red.

2, and 3. We really cannot give a full, decided preference for either form, and opinions differ widely as you may see by reports. Each form has its advantages and disadvantages.

4. About twenty during the honey season, and ten during the winter.

5. By all means, we should say, whenever it is coming in briskly.

We should be ill natured indeed, were we to refuse to answer any question coming from a "country doctor" or minister either for that matter. If they make it their business to serve mankind all their lives uncomplainingly, we certainly should be willing to help them whenever we can.

Both of my Queens—one from Blakeslee and one from Dean, arrived safely and in fine order. I notified both senders instanter, and send a card to thank you and to say that I have been quite successful in introducing them, particulars bye and bye. J. McMURDO.

The "dollar Queen" business seems now to have a firm basis, but since our note last month, saying we were nearly caught up with orders, so many have come in that we fear some may have to lay over until next season. In such cases please state explicitly whether you wish the money returned, or to have them placed first on the list next season.

G. Brigs, of New Sharon, this Co., had considerable basswood honey collected this season, although living three miles from any basswood timber.

R. WILKIN, Oscaloosa, Iowa.

After our main crop is over, our bees go to the low lands near the river, where it blossoms later, about a mile and a half perhaps; they still store considerable, but their wings soon get very ragged, and many doubtless perish from flying so great a distance. Enough may be brought three miles perhaps to give the honey a plain basswood flavor but we should hardly think it carried profitably so far.

The quilts stick rather tightly to the frames, so as to raise some when it is taken off. Is there any remedy? Have been thinking that if something could be used not touching the frames at all, it would be better. Would it not be a good plan to have the covers on hives so fixed that the sun could shine on the quilts or straw mats; that is, in spring and fall, or in the summer time when not too hot.

PETER MOYER, Sharpsville, Pa.

We find little trouble if the quilt be taken by one edge near the end of the frames, and "peeled" off. This will not disturb the frames, nor the bees seriously. If the quilt is kept up, we do not get the advantage of closed top frames, that we do when it comes down close to them. We think, (see Problem 8, Vol. 1) letting the sun shine on the quilt in spring would certainly be an advantage if it did not induce flying in unseasonable weather; nothing but careful experiment can tell how it will do.

FRIEND NOVICE:—Would it interest you, or your readers, to know how the bee business is prospering "away down East," among the "Blue noses." Well, almost universally, it is the old style—box hives--plenty of swarms—no honey. Thanks to GLEANINGS, there is at least one exception. Convinced by your writings that there was money in the business of bee-keeping, I adopted "Novice" as my model, and went ahead. Though our acquaintance extends but little over a year, yet the wind-mill, Novice's extractor, 46 Simplicity hives, the hexagonal apiary etc., all are here.

Last spring I began with 43 stocks—16, in old movable comb hives, 27 in boxes which I purchased for about $2.50 each. All were safely wintered, and by judicious feeding were in good condition when the honey harvest began. The spring, and first part of summer were very cold and wet. No honey was obtained from fruit blossoms, and I was obliged to feed my bees on the 4th of July to prevent starvation. My 27 box hives were transferred, but I could only get enough good comb out of them on an average to fill four of my Quinby frames. This left a vacancy of six frames. The honey harvest began the 6th of July.

To date, I have 2500 lbs. of superior clover honey, my hives are all filled with nice worker comb and 8 are double hives. I have only increased my stocks to 46, but with the increase of comb, and condition of bees, I consider my stocks at least worth $100.00 more than in the spring. My honey, bottled and labeled, is selling rapidly at the rate of 28 cts. per lb. clear of bottles; at this rate my honey will turn me $700.00 which with the $100.00 above makes me $800.00 clear profit from 43 stands.

My bees are rapidly filling up for winter on Buckwheat honey. The old fogy bee-keepers pronounce this the worst season they have ever known, they have little or no honey. I think myself that we seldom have poorer. The result of my summer's experiment has astonished every one, myself included.

That Novice may abundantly share the prosperity and happiness he is causing hundreds to enjoy, is the sincere wish of his British cousin, G. C. MILLER.
Mt. Hanley, N. S., Aug. 12th, 1874.

More than once have we been tempted to feel that our pay was but meager for the number of hours we labor daily for the good of Bee Culture, but friend M., you and others remind us that our recompense is ample; perhaps far greater than we deserve. If it is not all in dollars and cents 'tis in something far better, the consciousness of having earned the good will of our fellow laborers. Will our bee-keeping British cousins bear in mind that although we may never have the pleasure of giving them such a grasp of the hand as we might wish, yet a warm place in our heart will always be reserved for them.

Supposing I succeed in getting Queens from those eggs you are going to send me, how many bands will they have? or at least their progeny? My drones are all black of course. How many times will they have to be crossed till there is no trace of the Italian left. Novice why don't you tell us something about Egyptian bees sometime in GLEANINGS?

ILA MICHENER, Low Banks, Ontario, Can.

P. S.—There is something I wanted to tell you and nearly forgot. I have ten Queen cells nearly ready to cap from eggs from one of Mr. McMurdo's Queens.

If the dollar Queens are reared from imported mothers, we think none of the bees will ever show less than two yellow bands; and these two banded bees are very industrious and quite pleasant to handle. However, if Queens are reared from this brood that produces the two banded bees, they are very nearly black, and when mated with common drones, their progeny is about as disagreeable as bees can well be. and we can blame no one for vehemently denouncing such hybrids. Friend Muth of Cincinnati, has Egyptian bees. Will he please tell us more about them.

As our honey sells well at good prices, we have determined to feed sugar to our bees this fall. How many barrels should you get to feed say 70 colonies?

JAMES HEDDON, Dowagiac, Mich.

Much depends on the strength of your colonies. We have never found any ground at all for the assertion that two weak colonies would consume less when united than either of them separately, but on the contrary find the amount of food consumed as with all other stock, depends upon the number to be fed. We should estimate 25 lbs. of sugar, enough for the strongest colony from Sept. until May; 20 lbs., enough for all ordinary stocks, and where the bees only cover three or four combs on a frosty morning, perhaps 10 lbs. would suffice. Never err by giving too little, unless you expect to feed early in the spring, and on the other hand we should wish to give only about enough on the average to last until honey comes in next season, that it may not be in the way in the combs. Without seeing your 70 stocks we might guess that you would need six or seven barrels of sugar, if all their stores were removed in Sept.

These remarks refer to in-door wintering; we have had too little experience of late years to decide how much more will be required for out-door wintering, but perhaps a half more would not be far out of the way.

It is strange but I never can get a Queen that will occupy more than 5 or 6 frames with brood, and not nearly all the comb in frames at that, some at top and sides being filled with honey and pollen. Am inclined to disbelieve reports of Queens filling so many frames as some say they do. I have Queens from many breeders. J. A. BUCHANAN, Wintersville, O.

We partially agree with you friend B. A Queen that occupies 7 L. frames we think very fair; 'tis true that by mixing the combs up frequently, we may get *some brood* in 20 combs, or even more. Is this good economy? Those who are in doubt should make the experiment, but please try it on a *few* hives first.

MR. ROOT:—I have thickened my syrup with starch for more than 12 years to feed bees, I have not perceived any bad effect from it, if some one would feed a hive that way this fall and notice how it wintered, I would like to hear the result. I could not well feed with and without, myself. J. WINFIELD, Hubbard, O.

Starch and sugar are regarded in Chemistry as nearly identical, in fact starch is converted into sugar by a chemical process with such facility that the price of the two always remains about the same, and as the starch in our food is quickly changed to sugar in the process of digestion, may it not be the same with the bees? Still further is it not a fact that when you feed starch with the sugar, in form of a syrup, you find only the latter deposited in the cells. We are inclined to think that even if starch were taken with avidity, it would not prove a substitute for pollen nor even for Rye and Oat meal.

I send for some fresh eggs laid during the night, or within 24 hours before sending. These eggs will count with me. After they are grubs or larvæ one or two days old, I transfer them to Queen cells already built in Queenless Nuclei, where they are brought up Queens, and they will be beauties. I have two such now on hand, one laying, the other younger, besides one in the larvæ state. I wish these eggs to be from your imported Queen.

JOHN L. DAVIS, Delhi, Mich. Aug. 7th, 1874.

'Tis our opinion friend D. has hit on something really valuable. We at once removed the larvæ from three queen cells in our own Apiary, and introduced others much younger from the imported stock. They were all fed and taken care of; we use a quill toothpick for the operation; push it under the just hatched worker larvæ and remove it food and all from the worker cell, and carefully put it in the Queen cell, having previously "poked" out the original occupant. If done carefully we have no doubt of complete success, and a stubborn colony can be allowed to go on with as many of their own Queen cells as they choose to build. We sent two pieces to friend D., one containing eggs as he requested and the other larvæ so small as to be just visible. He writes:

The boxes were on hand last night the 13th inst. and this 14th, 4 P. M. there are 15 Queens started from the comb with larvæ; it came all right, the other came with the same mail but ⅔ of the eggs were jarred out of the cells. Among the Queen cells spoken of above, 4 are in incipient natural Queen cells into which I transferred the larvæ this morning. the bees seemed pleased and are already feeding them jelly. I cut the piece containing larvæ into three pieces and put into three hives and they have started 4, 5, and 6 cells respectively already. Thanks for promptness.

Please inform me, 1st: Are Queens reared in a two frame nucleus as good as those reared in an eight frame colony? My bees in nucleus tore down the cell I gave them and are building one for themselves, shall I allow them to proceed?

2nd. In making a nucleus, I by mistake, got the old Queen on one of the frames, which error was not discovered till two days after. In that case could I put her back in her own hive without endangering her life? or would you advise changing places of the nucleus and the old hive?

GEO. G. SCOTT, Dubuque, Iowa, July 15th. 1874.

1st. So far as vigor is concerned, we would let them use the cell if we were sure it contained an abundance of royal jelly, which seldom is the case unless the young colony have become fully organized and are bringing both honey and pollen industriously. 'Tis our opinion a pint of bees, in very warm weather, may do this as well as a larger number, but they would probably be unable to supply more than one or two cells, and a larger number of bees would generally be preferable.

2nd. Try and see if they will receive their old Queen of course, before running any risk. If they are gathering honey there will seldom be any trouble, but you can easily remove a frame and place her on it in the midst of the bees, having some smoke handy, in case she should be in danger. We introduce Queens newly hatched in this way, with scarcely ever a failure. If the honey yield has stopped it may be necessary to cage your old Queen before releasing her, after two days or more absence, but we should try her first on the plan given. Queens not valued highly we often introduce in the manner given without caging, and even let them run in at the entrance without opening the hive; at certain seasons all will go well every time, but at others every Queen, seemingly, will be destroyed. They can be released on a single comb without danger if you are prompt and fearless in rescuing them when attacked.

FRIEND NOVICE:—I had an extractor made on your plan, and it works like a charm. I am a sort of a genius but I have been trying to study out the principle of an extractor the last year or so and could get no idea of how to get it to work till I got first volume of GLEANINGS. I then went to my tin-smith but had much trouble to get him to understand it. However we made it work. I think I can beat you on prices; I had it made for frames 14x14½ inch, with sloping bottom, molasses gate excepted, for $4.15.

Bees are not doing very much here this summer, especially blacks. The Italians are still doing something. I have two that swarmed and have extracted 21 lbs. of honey from them, the blacks beside them have neither swarmed nor made any honey more than they consumed.

I am rearing a few dollar Queens this summer. I can't raise them fast enough, but if my life is spared till next spring I will breed on a larger scale. I should like to have your advice as to how to proceed. Would it be best to have my nuclei formed of say 2 or 3 standard frames, or have little boxes with four frames, 6 inches square? I am using the latter now.

I intend to buy bees to rear Queens with. I can buy them in box hives with drawers of from 12 to 15 lbs. of box honey for $5.00. Now, if I use the standard frame, would it be advisable to transfer them in September, extract the honey all from the body of the hive and give them all the comb, then feed sugar-syrup for winter? Comb honey sells here for 25 cts. per lb., and extracted for 18 cts., so they would not cost more than $2.00 per hive or hardly that. Or would it be a better plan to let them remain until spring and pay $5.00 for them without the box honey, and be sure of not losing them this winter? though there has not been much trouble in wintering in this section of the country.

AARON T. WEIDNER, Bigler, Pa.

Small hives, and small frames have been almost universally abandoned. You will find, we think that using the same frames used in your hives is much safest in the long run, and if not less than three combs of brood be used to start a nucleus, they will protect themselves from robbers without shutting them in at all. We think we would use nothing smaller than a hive capable of containing ten combs; these can then be built up to a good colony with little trouble after they get a laying Queen.

If the honey can all be extracted in August, or early in Sept., so as to feed the syrup and get everything in good shape during warm weather, it might do; but transferring in the fall, where the combs are filled with honey, is risky business even for an expert. The safer way would be to wait until spring we think, especially if bees winter well in your locality on natural stores.

Well, Mr. GLEANINGS, will you please tell us next month through the "wind-mill print" how Novice manages to separate his honey from the sugar-syrup that gets into his hives in various ways. We would like some times to feed a little syrup but don't want it with our honey. Some say to us when we offer extracted honey, that it is syrup. We tell them no, it is the pure honey and tell the truth too.

A. J. HOOVER, Plymouth, Pa.

Just exactly. In the spring we contrive to have all the sugar-syrup used up in rearing brood, before honey comes in, and if some heavy combs still remain we put them into nucleus hives to be used by bees not old enough to gather honey. If placed next to a brood comb it will be used up very fast.

The present season we found it impossible to use it where the bees had died, without reserving it until the honey yield had passed, and it is now being worked up to excellent advantage by upwards of 40 young colonies containing Queens just commencing to lay. Such combs filled heavy with sealed syrup, work in beautifully in this way. When we were extracting if by chance any comb was brought in containing sealed honey looking other than as if it had been freshly sealed, it was tested by tasting and if any trace of sugar was perceptible, 'twas condemned and reserved for brood-rearing. Should fall honey come in while feeding, we really don't know what is to be done unless empty combs be inserted temporarily to receive the new stores, extracting from them only, and leaving the brood combs untouched at this season.

My bees have not nor can I make them do much, there seems to be no honey in the clover, and we have no linn; buck-wheat is just commencing to bloom. Have only taken out with extractor from over 50 colonies 250 lbs., and think I had better have left that in as they don't increase much. Very cool, no comb honey at all. A. J. HOOVER, Aug. 8th, 1874.

Really friend H., such a report is almost as disheartening as to hear ones colonies are almost all dead. Did we not know that you really *know how* to take care of bees, we might think some of the fault yours.

What are the advantages of Alsike clover over White clover as a honey plant?

CHAS. H. RUE, Manalapan, N. J.

That it is a larger plant, bears more and larger blossoms, and consequently gives more honey. On the other hand we really fear it is not going to "hold" in the ground like the common white, or even the red clover. Something has been said of seeding with what is called Dutch White clover. Can any one tell us more about it? Seedsmen advertise it we think.

The cider from 700 trees I distill into "hog fat" without paying the U. S. any tax or demoralizing my bees. If your cider neighbors have as much trouble & expense—getting cheated to boot--as I have had in converting cider into brandy, they may find that hogs will utilize waste apples to a much greater profit.

J. B. TOWNLEY, Red Hill, Va.

We have a fine crop of apples here that we pray may never be used for brandy.

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal for	$2.25
" The Bee Keeper's Magazine "	1.75
" The Bee World "	2.25
" All three, The Bee Journals of America,	4.00

Books for Bee-Keepers.

SENT postpaid on receipt of price.

Langstroth on the Hive and Honey Bee	$2.00
Quinby's Mysteries of Bee Keeping	1.50
Bee Keeper's Text Book, muslin,	.75
" " " " paper,	.40

Good Books.

These, though not specially designed for Bee-keepers, have a tendency to inculcate principles that ensure success in bee-keeping as well as almost all other rural pursuits.

The first on the list should be in the hands of every one who has planted grape vines to shade the hives, as we have advised.

Any of these books will be forwarded by mail, *post-paid*, on receipt of price.

Fuller's Grape Culturist	$1.50
Fuller's Small Fruit Culturist	1.50
Fuller's Strawberry Culturist	.20
Fuller's Forest Tree Culturist	1.50
Henderson's Gardening for Profit	1.50
Henderson's Practical Floriculture	1.50
Tim Bunker Papers	1.50
Ten Acres Enough	1.25
Roosevelt's Five Acres too Much	1.50
Art of Saw Filing (Holly)	75
Window Gardening	1.50

Averill Chemical Paint.

THE *ONLY* RELIABLE.
THE *MOST* BEAUTIFUL.
THE *MOST* ECONOMICAL.
THE *MOST* DURABLE.

Requires no oil thinner or drier,
Requires no waste of time in mixing.
Has stood *eight years' criticisms*
With *yearly increased popularity*
And *yearly increased* sales.

Is sold by the gallon only, in packages of from 1 to 40 gallons each, in Purest White and any Color or Tint desired.

Address, for sample card of colors and price list,

Averill Chemical Paint Co.,
Office and Factory 132 & 134 East River Street,
CLEVELAND, OHIO.

PLEASANT AND PROFITABLE EMPLOYMENT, for male or female, in every city of the Union. Active persons can double their small investment every day. Inclose STAMP for particulars to

THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Address

DR. J. P. H. BROWN, Augusta, Ga.

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular.

Wm. W. CARY,
1tf Colerain, Franklin Co., Mass.

Choice Italian Queens.

A fine lot of **tested** Queens at $4.00 each, reared from the Imported stock of the late T. B. Hamlin. Full colonies for sale.

9t10$1p FRANK BENTON, Edgefield Junction, Tenn.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

G. W. Dean, River Styx. Medina Co., Ohio.
W. J. Hosmer, Janesville, Minnesota.
Dr. J. P. H. Brown, Augusta, Georgia.
R. S. Becktell, New Buffalo, Mich.
H. Nesbit, Cynthiana Harrison Co., Kentucky.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

J. H Martin, Hartford, N. Y.
Geo. T. Wheeler, Mexico, N. Y.
R. S. Becktell, New Buffalo, Mich.

In order to hasten the introduction of the ☞ STANDARD ☜ Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground	$2.00
Twenty frames for above 5¾ c. each	1.15
Sample Frame, by mail,	.10
Quilt	40
Or all complete except painting, for	3.50
The same in a bundle including nails, hinges etc,	3.25
Extractor made expressly for Standard frames. (Comb frame 14¼ wide, by 10 deep.)	$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN, Room 27, Tribune Building, Chicago.

Clark & Holcomb, HONEY LABEL PRINTERS,

Medina, - - -Ohio.

PRICES:

1000, Gummed and Cut,	$2.75
500, " " "	2.00
250, " " "	1.50

Sent post-paid on receipt of price.
Samples sent if desired. Address,

CLARK & HOLCOMB, Medina, O.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,		$6.50
Two " " "	"	8.50
Corks,	"	.75
Tin Foil Caps,	"	1.20
One and Two Pound Labels, per gross,		.75
The same with address printed to order, per 1000,		5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,..		19.00
Labels for above,	" "	.65
The same with printed address, per 1000		4.25

I shall have on hand and ready for shipment from the 15th of June, a large lot of 1 and 2 pound square flint (white) glass honey jars. They are of the same style as my other jars, which are by this time well enough known.

I shall sell 1 lb. (white) flint Glass Jars per gross	$8.00
2 " " " " " "	11.00

In lots of 10 gross or more, the same as the others, 50 cts. less per gross.

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

UNCAPPING KNIVES.

As good as any.

Each	.50
Per doz	$4.50

For further particulars, Address,

CHAS. F. MUTH,
1tf Cincinnati, O.

THE BEE WORLD.

OUR Bee Journal of the Southern States. Issued monthly at $2.00 per year. Sample copies free.
Address A. F. MOON & Co. Rome, Georgia.

ITALIAN BEES.

Full colonies in Langstroth hive, tested Queen from imported mother with stores enough to winter.......$15.00

My Queen mother is from the Nunn importation mentioned elsewhere. E. C. BLAKESLEE, Medina, O. 7tf

ILLUSTRATED JOURNAL

A magnificently Illustrated Monthly, with **Chromo** $2.50 a year. Send **10 cts.** for sample copy, or **30 cts.** for sample Chromo, terms to agents, etc. **Canvassers Wanted,** in every town, county & State. Address, THOMAS G. NEWMAN, Room 27, Tribune Building, Chicago.

Italian Queens by Mail.

THIRTEEN years experience. After August 7th, I will send Queens warranted pure etc., for $1.50 each. H. ALLEY, Wenham, Essex Co., Mass.

NEW YORK HONEY HOUSE.

No's 208, 210 and 212 South Fifth Avenue, Corner of Grand Street.

Cash on delivery, paid for Honey.
9t11d S. E. SPAIDS.

GOOD Rye Straw Mats for $3.00 per dozen. Sample by mail 50 cts.
9t12d A. N. DRAPER, Upper Alton, Ill.

STRAW Mats $4.00 per doz. or single one 50 cts. Sample mat by mail 65 cts. State the exact size of mat required.

Catnip seed from plants cultivated last season $1.00 per oz. or $12.00 per lb.
9t11d Address M. NEVINS, Cheviot, Ohio.

IMPORTED QUEENS.

JUST received, Imported Queens from the best district of Italy. Price:—One Queen $10.00, two $9.00 each. Orders filled immediately on receipt of price. Safe arrival guaranteed. Home bred Queens also for sale. References given if required.
9p CH. DADANT & SON, Hamilton, Hancock Co. Ill.

GLASS HONEY JARS.

1 lb Round Jars per gross		$5.50
2 " " "	" "	7.50
Corks	" "	75c to 1.00

Also, Window Glass, Lamp Chimneys, and Glassware of all kinds. For sale by B. L. FAHNESTOCK. Late B. L. Fahnestock, Fortune & Co. Glass manufacturers, 76 Wood St. Pittsburgh, Pa. 3d

FOR 50 CENTS we will send **The National Agriculturist.** a large, live, 16-page illustrated family paper, six months on trial, or with large first class chromo *Flowers of Paradise*, 15½ x 21 inches, for $1.00, and extend the time six months free to agents sending subscribers, besides large cash commission or premiums. **The Bee-Keepers' Magazine,** same terms. Terms to Agents sent free. Address **H. A. KING & CO., 75 Barclay Street, New York.**

QUINBY'S NEW SMOKER.

ALL who expect to manage bees successfully, will want the best method yet devised of using smoke. By putting old rags, rotten wood, or other material in a tin cylinder, and working a small bellows with one hand, smoke can be directed to any point, in quantities to suit. Price $1.50. Sent by mail $1.60. They are now improved by being made without solder.

Send for circular and price list. 7tf
M. QUINBY, St. Johnsville, Montgomery Co. N. Y.

FOR SALE.

On account of departure for California.

AN Apiary of 125 stocks of bees in Langstroth and Simplicity hives, 30 new hives, about 1000 empty combs (new), Extractor etc. Also, an improved farm of 253 acres, prairie and timber, in whole or part to suit, must be seen to be appreciated; a bargain sure.

For further particulars apply to or address
F. H. HARKINS, Home, Brown Co., Minn.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Photograph of Apiary, size 8x10, Mailed Free, Postpaid, $1.00, or Photograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume I, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. II October. 1874. No. 10

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke, and Mrs. Tupper.*

Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

[*Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.*]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

◆

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to conduct an Apiary....................109
Ventilating Cellars....................109
Cultivation of Catnip as a honey plant.......110
The Hive Question....................110
The King Bird found guilty....................110
Our Own Apiary....................111
Bees *do not* make honey....................112
Primary Department....................113
"Swarming" a grape vine....................113
Editorial....................114
Bees and Cider....................114
Honey Column....................114
How to advertise Honey....................114
About Honey....................115
Flying bees under glass during winter.......115

Page.
Pollen, its relation to brood-rearing..........116
Combs made by feeding, Cost of..........116
Problem No. 25....................116
Heads of Grain....................117
Disadvantage of two stories..........117
Losing Queens....................118
Late Fall Honey....................119
Are "Grand children" of a pure Queen ever black?..........118, 119
Shipping bees South to winter..........119
Temperature for Queen cells..........119
Unsealed stores....................120
Water for Bees....................120
Fertile workers....................120
Wintering bees in Long Hives..........120

DIVERS MATTERS.

An esteemed lady correspondent writes as follows in reply to a note from us:

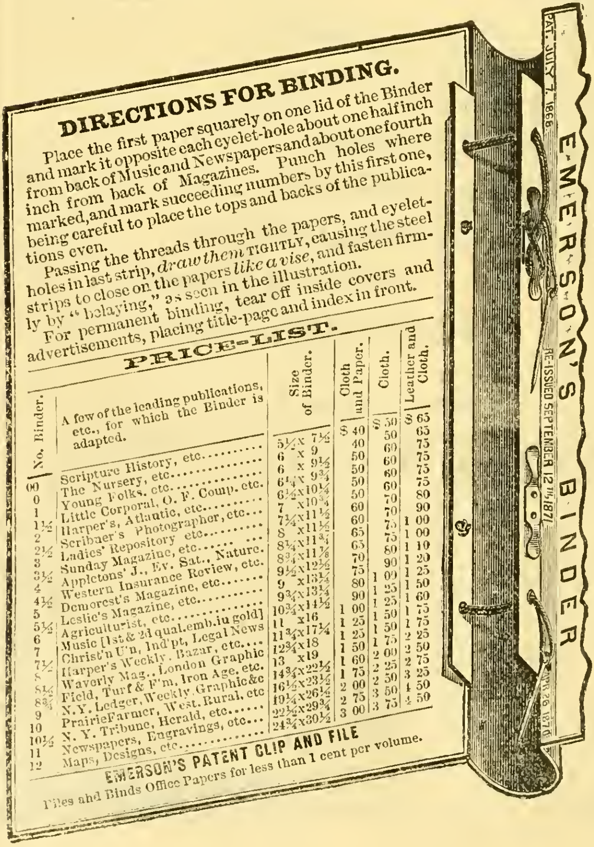
> Why do I sell colonies? Perhaps I shall not do so after all. The answer to your "why" is this—my salable surplus honey will not pay the season's expenses. I like to keep the Dr. and Cr. sides of my bee-keeping accounts balanced. Then if perchance, my bees all perish during the coming winter, I shall be left *desolate*, truly, but with no reason to regret my experiment in bee-keeping.

The spirit exactly. If we had 10.000 Bee-keepers in our nation and all of them paid out more money for hives, fixtures, *Bee Journals* etc., than they rec'd from the sales of honey, wax and colonies, of how much benefit would they be to our country? How many of our readers belong to this class? Perhaps we are stirring up a matter that may injure the sale of our implements, and even decrease the number of our subscribers; but if necessary, let such be the case, if we can only be assured that our friends are making their pursuit a paying one, and one that will help to make them feel independent and self sustaining. Now about the coming Convention at Pittsburgh: were it like our County Fairs, that each can attend with their own conveyance, at little or no expense, we should say, go all of you by all means; but if none were to attend except those who have made a balance on the credit side sufficient to more than pay all expenses, how large would the attendance be? It has been often urged, that 'tis by attending, that novices learn to *make* the pursuit a paying one. Does past experience show that matter has been brought forward at our National Conventions so much more valuable than any thing to be found in our Journals? 'Tis true our view may be a mistaken one, and it is the duty of each to act according to his own conviction. Pittsburgh is but a short distance from us; the round trip would probably not exceed $25.00, and perhaps three or four days time. Is it wrong for us to feel that we would far rather have the money and time to devote to the purpose of determining whether it be possible by means of a Green House, to get up healthy brood-rearing in a colony at any season of the year? Could any thing we might learn at the Convention be so valuable to us as a direct experiment of our own, in settling the question, whether it is possible to rear bees independently of the season?

While endeavoring to encourage an independent spirit among readers, it occurs to us to mention another matter; we beg that no one will think we intend any personal allusion for we should be very sorry indeed, to wound the feelings of any one. 'Tis this: quite a number of bee-keepers have suffered loss by fire or perhaps by other misfortune. What is to be done? Our advice would be, go to work at once and build up again as quickly and as quietly as possible. If any one is to blame 'tis most likely yourself for not taking the precaution to be insured. If sickness be added to other trials and assistance must be asked of some one, is it not far better to apply to your own relatives or those who are nearest and to whom you are best known? The idea of going into print with one's private trials, and soliciting aid through the Journals, we cannot think a wise one, and perhaps the greatest objection is that a dishonest person would be the one above all others who would not scruple to profit by the kind intentions of his more prudent and industrious fellow men.

* * *

'Tis seldom any invention has pleased us more *in actual use*, than the Emerson Binder. If GLEANINGS *is* worth preserving—we have tried to make it so—'twill pay you to have them all in a neat book, especially when the expense is only about 15c per Vol. Each Binder holds four volumes nicely and each No. can be added as it comes clean and new from the P. O. We will mail them free of postage for 50, 60, and 75c, the latter is much the neatest. The No. 2½ in the accompanying list is the size used for GLEANINGS. For $2.50 we will send post paid, GLEANINGS, volumes one two and three, neatly bound in the best cloth and leather Binder, so far as they have been published at time of receiving order.



DIRECTIONS FOR BINDING.

Place the first paper squarely on one lid of the Binder and mark it opposite each eyelet-hole about one half inch from back of Music and Newspapers and about one fourth inch from back of Magazines. Punch holes where marked, and mark succeeding numbers by this first one, being careful to place the tops and backs of the publications even.

Passing the threads through the papers, and eyelet-holes in last strip, *draw them* TIGHTLY, causing the steel strips to close on the papers *like a vise*, and fasten firmly by "belaying," as seen in the illustration.

For permanent binding, tear off inside covers and advertisements, placing title-page and index in front.

PRICE-LIST.

No. Binder.	A few of the leading publications, etc., for which the Binder is adapted.	Size of Binder.	Cloth and Paper.	Cloth.	Leather and Cloth.
00	Scripture History, etc.	5½x 7½	$ 40	$ 50	$ 65
0	The Nursery, etc.	6 x 9	40	50	65
1	Young Folks, etc.	6 x 9½	50	60	75
1½	Little Corporal, O. F. Comp. etc.	6¼x 9¾	50	60	75
2	Harper's, Atlantic, etc.	6½x10¼	50	60	75
2½	Scribner's Photographer, etc.	7 x10¾	50	60	75
3	Ladies' Repository etc.	7¼x11½	60	70	80
3½	Sunday Magazine, etc.	8 x11½	60	70	90
4	Appletons' J., Ev. Sat., Nature.	8¼x11¾	65	75	1 00
4½	Western Insurance Review, etc.	8¾x11⅞	65	75	1 00
5	Demorest's Magazine, etc.	9½x12½	70	80	1 10
5½	Leslie's Magazine, etc.	9 x13¼	75	90	1 20
6	Agriculturist, etc.	9¾x13¼	80	1 00	1 25
7	Music [1st & 2d qual. emb. in gold]	10¾x14½	90	1 25	1 50
7½	Christ'n U'n, Ind'pt, Legal News	11 x16	1 00	1 25	1 60
8	Harper's Weekly. Bazar, etc.	11¾x17¼	1 25	1 50	1 75
8½	Waverly Mag., London Graphic	12¾x18	1 25	1 50	1 75
8¾	Field, Turf & F'm, Iron Age, etc.	13 x19	1 50	1 75	2 25
9	N.Y. Ledger, Weekly Graphic &c	14¾x22½	1 60	2 00	2 50
10	PrairieFarmer, West. Rural, etc	16½x23½	1 75	2 25	2 75
10½	N. Y. Tribune, Herald, etc.	19¼x26½	2 00	2 50	3 25
11	Newspapers, Engravings, etc.	22½x29¾	2 75	3 50	4 50
12	Maps, Designs, etc.	24¾x30½	3 00	3 75	4 50

EMERSON'S PATENT CLIP AND FILE

Files and Binds Office Papers for less than 1 cent per volume.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. II. OCTOBER 1, 1874. No. X

HOW TO CONDUCT AN APIARY.

No. 10.

BY JAMES BOLIN.

ALTHOUGH the labors of the busy workers are over for this season, those of their owner are not by any means; and if he has many stocks to care for, this month will be a busy one for him. His labors no longer consist in preparations for surplus honey, or an increase in the number of his stocks; but in preparing those he has, for winter, if he would be cheered by their merry hum again next spring.

If the labors pertaining to Sept. were promptly and faithfully performed, those of this month will be much lightened. All stocks should now be strong in numbers, well supplied with stores, and have good prolific Queens. If, however, the apiarian has been negligent and put off until a more convenient season what should have been promptly done, no time must now be lost.

First and foremost then, he should see that none are Queenless, for trying to winter Queenless swarms leads to nothing but vexation. If any are Queenless, they should be supplied at once with a laying, or virgin Queen, or at farthest a Queen cell; as giving a stock brood at this season for the purpose of letting them rear a Queen, generally fails; not so much in rearing a Queen as in having her fertilized so late in the season. If neither Queen or cell is to be had, perhaps the best disposition that could be made of a Queenless stock, would be to unite it with one having a laying Queen.

If all have Queens, the next thing in order is to see that they are strong enough. Much has been said and written about wintering a pint or quart of bees, and it can be and has been done; still I venture the assertion that three out of every four who have tried it, have failed. Napoleon once said that Providence favored the heaviest battalions; so in bee culture, *luck* as a rule, always favors the strongest stocks, at all times.

On a cool day, the bees should occupy at least four of the spaces between the combs, and from that up to 7 or 8, or even more. If any are found that are too weak, they may still be strengthened in some localities, where bees are yet breeding, by giving them frames of brood from strong stocks that can spare it. Where they cannot be strengthened in this way, they should be united until sufficiently populous, as one strong stock that will be *almost sure* to live through the winter *is* worth more than two weak ones that will be about equally sure to die before spring.

Care should be taken, however, not to take too much brood from strong stocks, to aid weak ones, lest the strong ones be injured. If any are short of stores and cannot be supplied by exchanging combs with others having a surplus, feeding should be attended to at once.

One object in doing what feeding is necessary, as early in the fall as possible, is that as the center combs are then full of brood, the bees are forced to put the feed at the tops and back ends of the combs, instead of in the center, where they are quite sure to store the most of it if fed after the brood is hatched out. The storing of the syrup in the center of the hive, where the combs should be empty, I regard as one of the strongest objections to extracting all the honey and feeding syrup late in the fall.

In arranging the combs for winter, if the hive is full, the heavy combs of sealed honey should be placed on the outside, and those only partially filled, in the center, for the bees to cluster in. If there are not empty combs enough for them to cluster in, one or two should be emptied with the extractor, to give them more room.

If the hive is not full of combs, the combs and bees should be placed at one side, and the space contracted by a division board; and if any frames are only partially filled with comb they should, unless nearly full, be placed at one side of the hive, where the bees would naturally have them.

While handling the combs in the fall it will pay to cut a hole in them about one third of the way down from the top. The object of this passage is three fold: viz: it will save the lives of a great many workers that are caught away from the main cluster during cold spells of weather that occur before they are housed in the fall, and after they are taken out in the spring; it will enable them to reach their stores during the winter; and will promote breeding early in the spring, by enabling the Queen to distribute her eggs more regularly in the combs while it is too cold for her to pass readily around the outside of them.

During the cold weather that occurred last spring, I found on several occasions where I had neglected to to make a passage through the combs, a piece of sealed brood several inches square on one side of a comb, and not even an egg on the other side, the Queen being unable to reach it.

Where honey boards are used, they should be taken off the last of this month and their places supplied with quilts. By putting the quilts on early, before much freezing occurs, no frost will be formed on the combs and the bees will go into winter quarters in better condition than they would do if the honey boards were left on until they are housed.

Before putting on the quilts, a stick about ⅜ of an inch square should be laid across the tops of the frames, so as to leave a passage between them and the quilts.

Notwithstanding all that has been said about handling bees at all times, even in mid winter, I would earnestly advise that all the handling in the fall be done as early, and as long before housing as possible, as I have repeatedly found by experience, that disturbing bees much just before they are put into winter quarters has an injurious effect.

Last fall, and several preceeding ones, I introduced a number of Italian Queens just before putting my bees in the house, and although I lost none of the stocks into which they were introduced, yet I almost invariably found more dead bees in them the next spring, than in others that were not disturbed. For bees to gorge themselves with honey just before going into winter quarters, is about as unwise as for a person to eat a hearty supper just before going to bed. Some people may stand it, and so will some swarms of bees, but it is *unhealthy* for all that.

Did not the disturbance, consequent upon moving them so late in the fall, have something to do with the loss of the bees Mr. Daniels purchased? I think Mrs. Tupper mentioned a similar case, as having occurred in the West some time ago.

West Lodi, O.

[Friend B's remarks so completely cover the ground, that we hardly need add more, but it may not be amiss to advise that your Bee Houses or cellars be put in good trim now, before cold and stormy weather. For instance, our own Bee House was too cold last winter; we resorted to artificial heat then, but will it not be better to bank it in well with dirt all around and prepare straw cushions to put between the doors etc? If any cracks are to be seen from shrinking of lumber, they should be caulked with list or strips of cloth, doors made close etc. etc. For ventilating cellars we know of no plan equal to having a stove pipe run down within a few inches of the cellar bottom, the other end communicating with the pipe of the kitchen stove. By allowing a piece of burning paper to fall on the floor you can readily see how this tube draws all the heavy impure air from the floor, up the tube. We saw the arrangement at friend Blakeslee's. Get it all fixed now before it is neglected. Ed.]

CULTIVATION OF CATNIP AS A HONEY PLANT.

THE following was rec'd in answer to an inquiry for further particulars in regard to the cultivated Catnip mentioned on page 33, March No.

The bees are increasing in stores slightly upon the catnip. Everything else is dried out, and catnip don't produce half the honey it would were it not for the severe drouth. There are wells dry here at this time that have not failed before in forty years. Some of my swarms are building comb and some are not. On the 27th of July I examined nucleus No. 12 and noted in register, laying Queen. Aug. 14th I had occasion to draw on this number for a Queen, and was surprised to find them making a desperate effort to demonstrate the fallacy of the big hive theory. My nuclei are made by putting division board in centre of full sized L. hive, and a nucleus on each side. This one had but two combs with adhering bees, when formed, and as nearly all the old bees would return to the parent stock they could not be over strong. In the time between these two examinations (17 days) this little swarm had built one comb the full length to the bottom board and another comb $\frac{2}{3}$ as large. The large one was filled with brood nearly all capped over, and the smaller comb had some brood, and all this in the midst of this severe drouth and scarcity. Now who says a pint of bees in a hive will not work as well proportionally as five bushels? This nucleus was not fed a drop of any thing.

I believe the quality of the catnip honey is fully equal to the clover, and the color so near it that the difference is hardly perceptible. I desire to save all the seed, but have no plan of getting it out except by hand, and I found that too tedious last year. Will not some of the friends who have been sowing Alsike seed give me some light on the subject. This seed is much finer than the Alsike but I think it could be removed by the same process. I had supposed until this year that the catnip would not bloom the first season from the seed, but I sowed some last January, which is the best time to sow it for the purpose of raising plants to put out next spring, and it now stands 18 inches high and covered with bloom and with bees. M. NEVINS, Cheviot, O.

P. S.—Muth says he will pay the same price for catnip honey that he does for the best white clover.

We at one time had a strong inclination to try a ten acre field of Catnip, but when we found that the expense, rent, labor etc., would amount to something like $25.00 per acre, to us, cash out of pocket, and that 'twould even then be uncertain of giving any precise income, we confess we were somewhat intimidated. The same sum expended for sugar to be fed during the fall would be a positively safe investment; that is we get an equivalent from sugar without any doubt. If an acre of catnip would yield during the season, a barrel of honey, it would without doubt pay to rent land and cultivate it, but very much less would hardly make it a safe investment.

With farmers who have the land and time, the case is quite different, and if the catnip could be grown without any or but little *cash* out, we should say grow it by all means. Friend N. offers the seed as low as seedsmen, and of course knows it to be fresh and pure.

By the way will not "catnip" honey necessarily possess some medical qualities? For the "infantile portion of community," for instance?

[For Gleanings.]

THE HIVE QUESTION.

IT seems to me that there is a general misunderstanding on the subject of mammoth hives, a subject which is just now calling forth a good deal of comment; and if you will permit me to say a few words Mr. Editor I will try to keep silent in the future as I have in the past, for it doesn't behoove every one to become a regular contributor to a Bee Journal if he is posessor of a few bees. In the first place I would say that hives which are arranged for securing such enormous yields of honey as we hear tell of, are a humbug. Now men of mammoth hives don't say "fogy" till I explain in what way they are humbugs. I keep two mammoths in my apiary just for "fun," and have arrived at the following conclusion:

In the first place they gather no more honey than the same number of bees when placed in two or three hives with one half or one third as many combs in each; and it takes more work to extract a given amount of honey from the big things, than it does from several small ones. Also, it often becomes necessary to move a hive when full of honey, and then if you are single handed, as many of us are, what are you going to do? And when it comes to wintering you have either got to divide—thus entailing an extra expense of two sets of hives—or else have a regular old fashioned barn raising to get them into the house. I have 62 colonies in hives of eight frames each, 11½x 15⅜ and I can attend to them more easily and get just as much honey as if they were in 31 hives of twice their capacity, and my Queens do not lay themselves all away the first season.

I know it sounds large to hear it said that Mr. Somebody had a single hive to gather six or eight hundred lbs in one season, and it no doubt does stagger the old box-hive fraternity. But if any one will pay me for the extra trouble I will (a la Hosmer) have one hive of bees to gather 1000 lbs. of honey in '75, providing it is a good season, and will not brag about it either. It is my opinion that for ease of handling and for profit we want hives with capacity of about 100 lbs. of honey *per season* in average localities.

There Mr. Editor I have said my say, and I think that experience will teach many to "see it" in about the same light. L. B. HOGUE.

Loydsville, O. Sept. 8th, 1874.

The hive question is yet receiving much attention. Why do we want a better frame than the Langstroth? The two story hive—I think—for many reasons, will ever maintain a front position. The large hives about which I consulted you two years ago, with eleven Langstroth frames below, and fifteen above, the upper ones hanging crosswise, and down within three eights of an inch of the lower ones, is the favorite in my apiary. My bees have done well this season. I am still taking honey from the upper story,

W. P. MOORE, Richland Station, Tenn., Aug. 2nd, '74.

THE KING BIRD FOUND GUILTY.

T. L. WAITE, of Berea, O., furnishes some very positive evidence and also mentions a habit of the King bird, we think not generally known to naturalists. During the month of June '72, a flock of seven of these birds were making such regular and constant visits to his Apiary that his suspicions were aroused and concealing himself, he with watch in hand observed a single bird snap up 5 to 8 per minute. After having pursued this "innocent" amusement for a sufficient interval, his birdship was in the habit of taking a rest on a neighboring tree, where after a short meditation he commenced a series of muscular contortions of the head and neck that finally resulted in his opening his mouth wide and "heaving up" a wad of some strange black looking substance. By chance their perch was close over a bed of Rhubarb or Pie plant and our friend secured a number of these wads as they fell, and thus settled the point of their being nothing more nor less, than crushed bees. After they had "squeezed" out all the honey, probably having no farther use for the "pomace" it was unceremoniously cast aside while his worship with a keen appetite and zest for the sport, went "bee hunting" again. They came regularly for a "meal" two or three times a day. Guess we had better use our rifles and shot guns in such a way as to induce them to learn that Apiaries are "unhealthy" localities for such boarders.

OUR OWN APIARY.

THE weather is to-day, Aug. 29th, very dry, and sultry, the wind has blown the dust and leaves about in such disorder that our Apiary presents anything but a tidy appearance. To add to our troubles, the cider mill has commenced work and our bees were on hand punctually, as they were a year ago. Although quite a number of stocks belonging to others are kept in the neighborhood and if we are compelled to resort to out-door feeding, we shall have to feed the whole, yet we cannot have our bees annoy our neighbors; if they continue to work at the cider mill we *must* feed them sugar all they can all carry away. To add to our troubles, already a suspiciously large number of bees are crawling about in the dust looking for all the world as if they had had "too much cider." We are heartily glad to-morrow is Sunday, for we are tired. Our paper is out on time as usual 'tis true, but it was only by working nights that we were prompt this month.

Oh! that it only *would* rain.

Aug. 31st—We arose yesterday morning feeling that at least one day in the week our bees would not be tempted, for cider mills fortunately do not "work" on Sunday. Early in the morning they seemed to be very thievishly inclined for they buzzed querulously from hive to hive in a manner that betokens an unhealthy excitement, and greed for gain not to be procured through the ordinary path of honest industry. We can readily imagine the feeling that a gambler or burglar must have after first pocketing dishonest gains; perhaps he has just abandoned an honorable calling because times are dull, and full of an unhealthy excitement at such a sudden and easy way of getting money he may for a time evade stinging reproaches of a guilty conscience for having appropiated without equivalent, the honest, innocent, earnings of his fellow men; but does not the time come when he feels that he would be far happier with the most meagre fare or plainest clothing for his wife and family, could he only once more lie down at night with the old feeling, that 'twas all his own and honestly gained, and that no one of his fellow beings had been in the least wronged out of their honest earnings? Have bees any conscience? are they just as happy while robbing their neighbors? We mused thus while studying their movements this Sabbath morning.

Later, after the dew was off, we were pleased to see them launching out in an opposite direction from the cider mill and when they began returning laden, and with that weary happy hum, that surely betokens honest labor, our curiosity was aroused. By nine o'clock a perfect stream of bees were pouring out in this same direction, and they hurried out of the hives to file in with the throng in a way that seemed to indicate none would be left. 'Twas only an hour and a half to church time, yet we clambered over the fence, and "poured" in the same direction, our enthusiasm being kept up by hearing their hum over head. After passing through a piece of woods about a mile from home we found about a half acre of Bone set, or Thoroughwort, (*Eupatorium Perfoliatum*) and the view on coming suddenly out on this mass of bloom, literally dancing, and joyous, with our Imported Queens young grand children, was indescribable. The blossoms were nearly on a level with ones head and the music the bees made was decidedly different in tone from that around the cider mill or the out door sugar feeding either for that matter. Their little selves were all dusted with the snowy pollen and their happy hum seemed to indicate that they, like ourself, felt such a feeling of thankfulness to our Creator for the beautiful world he has given us, that even existence is a pleasure. As this, could not employ all of them we went farther, and in a dense wood beyond found acres of White snake root (*Eupatorium Lageratoides*) not yet quite in bloom, but still visited quite plentifully with bees. Another plant interested us still more, but before describing it we will say that for several years past we have in the fall noticed bees coming in laden, that had a queer white spot on the tuft between the roots of the wings. This sometimes had almost the appearance of a drop of white paint having fallen on them. In vain did we sally out with the determination of finding what plant gave this white powder, for we were invariably baffled, and finally consoled ourselves by thinking it must be from thistles. To-day however, no bees were on thistles, and yet this white spot was plainer than ever as they hurried into the hive to unload, and also when they hied to the woods again. The bells were ringing for church, and we were more than a mile away in the woods, yet with uncovered head we stooped in mute wonder over the solution of the riddle that had perplexed us so long. The plant was the wild Touch-me-not, (*Impatiens*) so familiar to urchins on account of the wonderful pods that snap all to pieces when touched. Well the honey is secreted in a spur in the bottom of the flower, and the bee can only reach this by diving down into it almost out of sight and when the coveted treasure is obtained he backs out with a ludicrous kicking and sprawling of his legs, and in so doing the down on his back is ruffled up the wrong way. Now this would be pretty certain to get the pollen dusted all over him, but nature to make sure has planted a little tuft that bears the pollen just on the upper side of the entrance to the flower, and in his struggles to get out the white pollen is brushed all into his back most effectually, to be carried to the next flower and so on.

As we hastened homeward with a boquet composed of the different plants named, we passed by a quantity of what is called here, Rag weed, or Bitter weed, (*Ambrosia Artemisiæfolia*) here too the bees and nature were at work. Since Darwin has partially enlightened us we might say too perhaps, that "Natural selection" was at work. This plant bears the male, or pollen bearing flowers on tall racemes somewhat similar to corn, while the seeds are produced lower down where the branches leave the stem. As bees only work occasionally on this plant they are not really necessary to its fertilization as in the case of the Touch-me-not, and accordingly we find that it produces hundreds of the male or pollen bearing flowers to one of the seed blossoms. Now is there not something analogous in this to the fact that the economy of the bee hive demands that hundreds of drones be reared where only one is needed? The pollen is borne so much above the seed blossoms that the winds in wafting it are almost sure to fertilize the blossoms of some neighboring plant, and the drones as they circle up in mid air impelled by that wonderful instinct, are more than likely to meet with Queens from other hives than their own.

We reached church in very good season, and in a much more devout frame of mind than if we had spent the whole of the morning sleepily over books and papers.

The spring scales showed at night a gain of *one half* lb., which though a small matter was enough to set us rejoicing. As the suspended colony is less than an average one, we can safely say we got 35 lbs. of honey during the day, from the Autumn Wild Flowers; and to-day they show ¾ of a lb., or about 52 lbs. from the whole Apiary.

Sept. 1*st*—One half lb. again to-day, and we think that they really have neglected the cider mill, as our neighbor promised to send his little boy up to notify us, if they troubled him again as they did last week.

Sept. 18*th*—Nearly three weeks have passed and the bees have been busy, some of them on the Autumn wild flowers, others on dry sugar in the open air, but by far too many at the cider mill from which we have labored in vain to entice them, especially when they made "sweet apple" cider. With the extremely warm dry weather we have had this month, we have not succeeded in keeping them away entirely, although pollen in abundance, and considerable honey has been brought from the woods mentioned. Since writing before, we have learned there are about 200 acres of the woodland fenced close from all kinds of stock, and also that the reason for this is, that same White Snake root that literally whitens the ground, is the cause of a species of "milk sickness." Since several people and many cows and horses have died from this, the woodland has been carefully fenced up. The honey from the weed has something of a hoarhound flavor, and gives the hives a peculiar odor. It has been suggested that our bees too, died from this same "milk sickness," but we are more inclined to accord it to the cider mill. At any rate our hives are now most of them heavy with nicely sealed stores and pollen; these stores are a mixture of honey and cider with liberal doses of sugar syrup given every evening, and all we can do is to hope the latter will counterbalance all ill effects of the former. As they have all been kept rearing brood briskly we trust at least two thirds of these stores are sugar.

We have loaned our Quinby smoker to the cider mill folks, and we are again using our "sauce pan." It certainly has one advantage, and that is, that it don't "go out" even if we do forget to "squeeze" it incessantly, but on the other hand it smokes ones eyes badly at times, and when the smoke don't happen to go in the right direction we sometimes get a sally from the hybrids that make us long for the bellows smoker again. The latter does good service at the mill, but it doubtless takes much time to drive the bees a little ways. We can only congratulate ourselves that 'twill soon be cool, and then such troubles will be over.

Sept. 19*th*—'Twas just one year ago to-day that we moved our bees to the swamp on account of the cider mill, and the "cider mill man" has just been here to tell us that something must be done with "them bees." Of course we dampened the sugar, and soon had all the bees tame and wild from a mile or more around, having a grand free picnic at our expense. The weather has been unusually warm and sultry; cool days that must soon come, will probably end this trouble for this season.

Sept. 21*st*—We have tried putting a strong colony in our bee house, placing it before the window so that it could receive the full rays of the morning sun. The great problem was, to see whether after collecting on the windows, they would regain their hive. It is with much joy that we are able to state they did, nearly all, after they had once learned how. The young Italians learned the programme readily, and even made foraging voyages to remote corners of the room to some combs of honey, and returned with the spoils, safely to their hive. The old bees, accustomed to the fields, as we anticipated, buzzed on the window until tired and then formed in a large cluster at the top of the window. In about an hour a few found the hive again and set up a loud call, and by noon, the entrance was covered with bees that with elevated bodies were fanning their wings at a great rate to make known to their comrades the joyful intelligence. By sundown, all were in safely except perhaps a dozen or two.

With space for them to enjoy the full sunshine, we have no fear but that all would regain the hive safely, but we confess it seems quite improbable that the bees from a dozen hives or more in a small enclosure would all regain their respective hives; still, until we have tested the matter, we have no real right to doubt.

We have before made mention of bees with distended bodies found around on the ground during "cider time." Well, among those on the window, we found quite a number such, and they soon fell to the floor. Later in the day the floor was soiled with their excrement and this soon had quite an unpleasant smell that reminded us vividly of two years ago, yet this was quite a warm day. Could they have had ample room to fly farther from the hive perhaps this would not have been observable, but we cannot help thinking it is the effect of the cider mill. *Perhaps* giving them a fly every week or two during the winter might do much to avoid the evil effects of such diet but that it will prove a perfect remedy for the gradual dwindling away as did ours last spring, we hardly dare hope. Our bees did *not* die with dysentery as has been intimated.

From an experiment made we would decide that bees do not *make* honey, but simply gather it. We threw out some of the thinnest, raw unripened honey that we could find during the basswood harvest, and put it in a fruit jar covering the mouth with thin guaze only. After keeping it in a very warm place for several weeks it was found to be as thick as the thickest honey, to have lost its raw taste, and to have become nice honey, such as is taken out of sealed comb.

OUR PRIMARY DEPARTMENT,

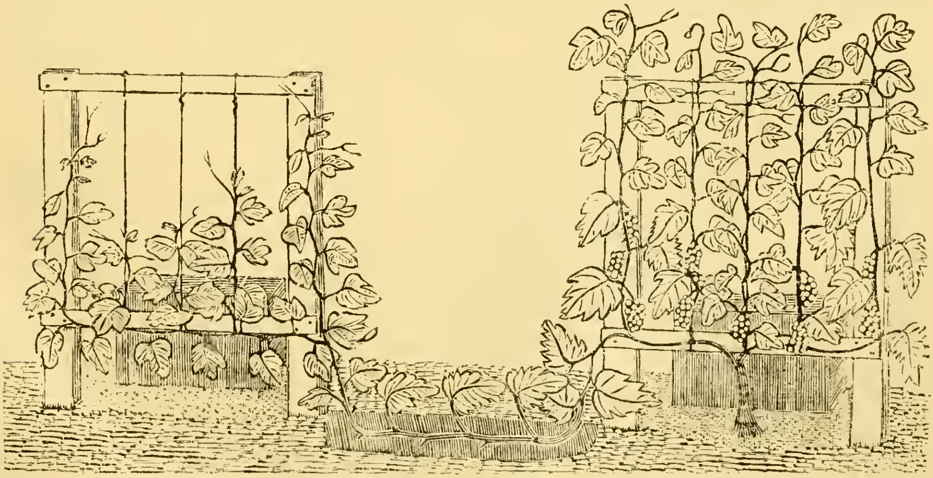
Or First Principles in Bee-Keeping.

[Designed especially for the veriest novices, and those who know nothing of bees whatever. Conducted by a fellow Novice of several years experience replete with blunders, as well as with occasional successes.]

WE promised to tell how to "swarm grape vines artificially." Very well; your one vine is supposed to have become strong and vigorous, and to have not only covered the trellis completely, but to have seemingly become impatient of being restrained by the continual pinching back necessary to keep it within such narrow limits. It in fact has perhaps manifested this by blossoming and attempting to bear grapes out of season near the top bar of the trellis. It is precisely like a colony having too many bees for the size of the hive. Very likely each one of the ten upright canes has produced three or four fine clusters of extra large nice berries, but still the vigor of the vine, (if our directions have been carefully complied with) is equal to something more, and accordingly we encourage one of the outside canes by allowing it to send a new shoot up above the rest of the trellis. When this is well started, the whole cane is bent over so as to go strait down to the ground and then curved outward so as to lie in a trench a few inches deep, that it may be covered with soil enough to protect it from injury.

A new trellis is now to be constructed, if it has not been done before, just 3 feet from the old one; that is, the two trellises are to have a walk of just 3 feet in width between them. The new shoot grows very rapidly and can soon be tied up to the first post of the new trellis and across the lower bar. Now select a side shoot for each wire, and almost before you are aware of it, you have another complete grape vine.

The accompanying engraving will make it all plain.



"SWARMING" A GRAPE VINE.

The view is taken from the south side, and the hives are just visible through the foliage in their proper places. One strong vine will furnish shoots for not only a new one at the right and left, but also for the whole six that are to surround the original one, even in a single season if need be. As the new vines take root almost as soon as laid down, the old vine suffers but little loss, and new ones that were started in this manner the 4th of July last season, are now pretty well loaded with fine grapes; their connection with the old vine enabling them to become bearing vines in one year only. Although their remaining attached to the old vine does not seem to impair its productiveness, the aid they receive from it is quite important. This matter we tested this season by chopping one of the new vines off where it left the old one, as we were hoeing about them. It had been growing with great vigor, and had considerable fruit on it, but the next day the sun hung its foliage like wilted cabbage leaves. By heavy mulching, and buckets of water, we induced it to look up again, but it is far behind its comrades and we have decided it best not to sever "parental ties" in future at all, and if we are careful in tieing them close to the posts in laying them down, they are never in the way. One strong Concord vine, we think could in this manner be easily increased to 100 in three years, and they would all bear a crop in the year following the one in which they were started. So far as quality and size is concerned, of fruit from vines trained in this manner we would only say that we have never before seen it equaled. Our vines are now loaded with delicious fruit, and Blue Eye's eloquent praises of "Papa's *whole lot* o' dapes," coupled with the appearance of the great purple bunches (which we would willingly share with our readers if we could) is enough to give one a mania for "grape growing," almost equal in virulence to the bee fever. Long may these two innocent and fascinating industrial pursuits, thrive in harmony. The idea, that the culture of either in any way interferes with the other is a joke entirely outside of our experience. Where grapes are trained thus, fowls if allowed will make sad havoc among them; the bees of course then work on the bruised ones but never otherwise.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS
MEDINA, OHIO.

Terms: 75c. Per Annum.
For Club Rates see Last Page.

MEDINA, OCT. 1, 1874.

THE *Bee World* for Aug., was laid on our table on the 8th of Sept., but neither the *A. B. J.*, nor *B. K. M.*, were received until the 10th.

IF N. C. Mitchell has made good his promises of last spring in *even a single instance* we should be glad to publish it. Was not his pretended reformation only a pretense to get more victims?

FOURTEEN No's for 75c. All subscriptions rec'd between now and Jan. 1st, will be credited until Jan. 1876. As we wish to be equally liberal with our old subscribers, to all who renew before Jan. 1st. we will send a—a—not a horse and wagon because they wouldn't go into the post office, so we'll say a penny whistle or—well, you'll know what when it comes.

◆

LOTS of trouble with the cider mill. To-day, Sept. 25th, the owner of the mill is laying idle at our expense. Even dampened sugar wont call the bees away now, and we don't know whether the trouble is that we have got so many more, or that the "Imported grand children" have a special fancy for sweet apple juice. We fear bees and cider mills are unsuited to be neighbors, at any rate 'tis rather an expensive joke on us now. We have offered to enclose the mill, and to furnish wire cloth doors and windows, but our neighbor don't relish being shut up and wont listen to it.

Sept. 25th—Sunshine once more, already. After a visit to the scene of war (cider mill) this morning about sunrise, P. G. quietly suggested cloth curtains as a remedy for the troubles that a dozen men had puzzled over in vain, and about which *two* had almost quarrelled. Some strips of pine, a few nails, $2.50 worth of sheeting 2½ y'ds wide, and two willing hearts and hands, (Novice and the cider man) completed the whole in a couple of hours; the relief we feel in seeing the bees completely baffled and obliged to return to their legitimate duties also allowing the cider man to return to his, is more than we can tell.

◆

SEVERAL have written us in regard to making GLEANINGS larger with price to correspond, while thanking them we would say, that in order to do so we must have a considerable larger number of subscribers, and as we have full confidence in the judgment and good sense of our American people we have felt sure they will give us the necessary support as soon as we deserve it. In this age of the world real worth is sure to be appreciated sooner or later. Rest assured that when the world seemingly neglects to appreciate you, it is pretty certain to be the case that there is nothing *to* appreciate, and that the fault is your own, and not theirs. Is not GLEANINGS as it is now, about large enough to contain all that is really new and valuable? Our friends may not all be aware that with the close small type used in GLEANINGS of late, it actually contains more matters by *measure* than either the *Bee-Keepers's Magazine* or *Bee World*, and nearly if not quite as much as the *American Bee Journal*. The contents are also almost if not *entirely original*, and even if not always chosen with the happiest faculty of pleasing every body, we have so far been cheered in our labors with quite a comfortable amount of patronage. When we succeed in deserving a better one we feel sure we'll get it. Don't you kind reader?

◆

WE have at a considerable expense of time and money, had a Lithograph made of the Hexagonal Apiary. Of its merits we will say nothing, preferring that it shall speak for itself.

Our Photo' was very well so far as Photography is capable of doing, but the amount of foliage threw so many shadows, as may have been observed, that a full representation was impossible. In the new picture we fear our Artist has gone to the other extreme and cut down the vines so much that they hardly do justice; however, as he has given us a 12x16 picture, we have ample room for delineating all the particulars: Bee House, Walks, Feeding room, Fountain, Standard Hive, Standard Extractor, inside and outside view of the latter etc. etc., besides a full complete view of the Wind-mill. Instead of giving an *exact* representation of our own Apiary we have thought best to give it as we would have one were we to lay out one anew, and we trust our efforts will meet with at least a tolerable show of approval. The picture will be securely put up on a roller and mailed for 30c.

Or sent with GLEANINGS for........................$1.00
" to any subscriber sending one name beside his own.
" " " " " for either of the previous volumes.
Vol's 1, 2 and 3, including Lithograph, ordered at one time..$2.00

The pictures are now ready for mailing. We have purposely omitted making any mention of them until they were all ready for mailing to avoid disappointment.

HONEY COLUMN.

AT the stores where I sell honey they put the bottles on the shelves and they are not noticed. Would not a good show bill with Pure Extracted Honey for Sale, printed on it be a good thing?

J. WINFIELD, Hubbard, O. Aug. 1st, 1874.

Such a card might be a good thing, but our stores and shops are so filled up with advertisements that people nowadays have a fashion of not reading any of them. This we have tested by experiment. If you can get a neat small glass case to be set on the counter, containing a sample of each of the different jars, also one jar containing a nice piece of comb honey it will attract attention quickly, and will be recognized at once by every one. This also helps the sale of the ext'd honey, for if customers are informed the jar containing one lb. comb honey, and two lbs. ext'd is worth one dollar, while the three lb. jar of the latter is only 75c, they can soon reason out the real state of affairs. Should the dollar jars go off fastest, you can buy box honey of your neighbors and keep up the trade.

From the *Daily Times* of Binghampton, N. Y. of Sept. 1st, we gather that Broome Co., can boast of quite a number of successful Scientific Bee Farmers. Their uniform succes in getting large yields of *box* honey, shows that they either are experts in the business or that their locality is extraordinary; possibly both.

Mr. J. P. Moore's yield is mentioned in another place. Mr. L. Beard from 22 stocks in the spring, has over one ton of box honey; his best colony gave about 160 lbs. Mr. J. L. Schofield has 31 stands that will average 91 lbs. of box honey each; one stock giving over 225. Mr. D. D. Winn, of Port Crane, has ten stocks that will average 100 lbs. per colony; best, gave 180 lbs. The most successful yields were from hives in which the honey was stored in frames instead of boxes. The honey is sold in N. Y. City at an average of from 25 to 30c per lb. These are all men who take Bee Journals.

FRIEND NOVICE:—I almost think I am entitled to a place in the column of "Blasted hopes" this fall. From the condition my bees were in last spring, I expected 3 or four tons of box honey, but alas! man merely proposes. Owing to the loss of nearly all the clover by winter killing, and drouth now, I shall have to content myself by reporting 3000 lbs.

'Tis true, the breeding apartments are full of honey, and I might extract from 40 to 50 lbs. or even more, from each of them, and thus send in a much more favorable report, but the fact is, the good people of this section don't like extracted honey, and my bees don't like syrup too well; so I guess I will leave the honey where it is until spring. I will then extract enough to keep it from interfering with breeding.

JAMES BOLIN, West Lodi, O.

L——wrote Grimm and has just rec'd a letter from that gentleman stating that he has 12000 lbs. ext'd and 8000 lbs. comb. M. H. TWEED, Pittsburgh, Pa.

Have taken 3036½ lbs. of honey.
J. F. MONTGOMERY, Lincoln, Tenn. Aug. 26th, 1874.

Short and sweet friend M. but you don't tell how many bees produced it.

◆

[For Gleanings.]

ABOUT HONEY.

FRIEND NOVICE:—We have heard many complaints made about extracted honey put up in common glass jars, with corks or metal tops. Even "Novice" says in the last GLEANINGS, that honey which he put up last year, oozed out of the tops of the jars or candied during the winter. We once experienced the same difficulty but have since learned how to take care of honey better and now have no such trouble. The plan of extracting honey as soon as gathered, straining it from the machine into the barrel, and drawing it off at once into jars, has caused much of this trouble.

Before commencing to extract, a portion of the honey in each frame should be sealed. This may be taken as an indication that the whole of that yield is evaporated and ripened sufficiently to be taken from the hive. After extracting, strain it or not as you like; it makes no difference in the end. Just draw it off into buckets holding from three to five gallons each, and allow it to stand about two weeks, skimming it every day or two. Unless there is old honey candied in the combs, and thus mixed with the new in extracting, there will be no sediment. The skimmings will remove everything else, including what it is important to have removed, namely the little frothy substance which rises on the honey and which seems to be the cause of the fermenting and oozing out at the top of the jar.

Evaporation takes place while the honey remains in the buckets which leaves it still thicker to bottle. Honey treated in this way will be of good consistency, clear, of better flavor than if put up without being allowed to stand and have the scum removed, and it will be wholly free from the tendency to ferment and ooze out, while it remains liquid much longer than if put up in the ordinary manner.

A visit to the Apiary of a friend in Nashville, Tenn., reveals the result of the same plan, only carried a little farther. This progressive amateur bee culturist has some very fine samples of honey which he put up over three years ago, and which is now liquid and as clear as when put up. As he is too modest to state his method through the Bee Journals we think of making it known in some future article.

FRANK BENTON, Edgefield Junction, Tenn.

◆

FLYING BEES UNDER GLASS DURING THE WINTER.

BY reference to Problem No. 8, (April 1873) and No. 19, (Jan. '74) it will be seen we have been much interested in the feasibility of taking advantage of the natural heat of the sun, by cutting off the cold winds with glass sashes, as gardeners do in caring for choice plants and early vegetables. The only doubt that beset us was that it seemed somewhat improbable, from what we knew of the habits of bees, that they would go back safely to their hives instead of flying against the glass as they do in our dwellings. Our experiment mentioned on page 22 Jan. No., rather discouraged us, but we have no south windows, therefore could not give the bees the full rays of the sun. Friend Palmer, of Hart, Mich., succeeded better, and he sent us in May, a postal card that we really believe has been more valued than all other documents rec'd on wintering troubles. It would have appeared at the proper time but P. G. urged us to "go slow" this time, and if possible test the matter ourselves before going into print with it. As natural pollen has been coming in ever since its reception no such experiment has been made. This is the precious document:

> I have had a swarm in a cold frame. Size of sash 2½x4 feet, frame 3 feet high in front and 4 feet high at back or north end. Placed the hive close to the back end, facing south, with a dish of rye flour on top. They worked on the flour and went back in the hive all right. HENRY PALMER, Hart, Mich., May, 5th, 1874.

In the reports given of Mich. Bee-keeper's Convention, May 6th, '74, brief allusion was made to a paper from H. E. Bidwell detailing something new in regard to wintering, but either the matter was regarded as unimportant, or for some other reason, nothing intelligible was made public in regard to it until the *Bee-Keeper's Magazine* gave the whole paper in their Sept. No. While thanking them for bringing forward a paper of such apparently great value, we cannot see why it was so delayed. If it *is* perfectly authentic, all of the various papers on ventilation, diet, beehouses etc., have been misdirected zeal. Again, in all that is to be seen on the subject, Mr. Bidwell's post office address is carefully suppressed. Is this characteristic of we Americans and our institutions? If Mr. B. will *himself* state to the public that he prefers to answer no questions in regard to the matter, 'tis our impression that none of the readers of any of our Bee Journals would be so impolite as to intrude on him. We extract from the *B. K. M.*, the most important part of the paper as follows:

> "Having bought some bees last winter, which we were anxious to fly before putting them in the cellar, and having near at hand some empty hot-beds—which had been dug out in the fall for the purpose of filling early in the spring—we thought perhaps a swarm might fly in one; something risked, something gained; so we put one in. The beds were roomy, 6x12 feet, so that four sash 3x6 feet would cover them. The depth was about three feet, with a slope to the glass of one foot. In about twenty minutes after putting on the sash—it being mid-day, with a clear sky—the temperature arose within to 70°, and the bees commenced flying briskly and voiding freely. At night we found *every bee had returned to the hive.*
>
> The next day being clear, we put in two more; the next four; and the next eight. These all returned so well to their respective hives, that we next put in eight more, two deep. Being so well satisfied with the result, and having six of these large hot-beds dug out, we flew 111 stocks, as occasion required until spring.
>
> The only caution I would suggest would be not to fly them too often, which can be readily prevented by covering the sash with boards.
>
> Occasionally the bees will alight on the hives or collect on the glass, if the atmosphere gets hot and close within; they can easily be dispersed by sprinkling straw on the glass to shade the bees and cool off the bed. A similar occurrence frequently happens out of doors, on a warm, close day, after the bees have been confined some time in their hives; they alight on everything, and remain until cold or hunger reminds them of their home.
>
> The advantages accruing to this method of wintering bees are—you can safely fly them at your pleasure; none are lost in the chilly winds or snow, or on the cold ground, which increases their value in our estimation two-fold."

From this brief paper we found it impossible to gather: First, whether the sun was the sole source of heat and these were only "cold pits" or "cold frames" as they are variously termed, or whether it was a veritable "hot bed." Secondly, did the bees remain in the pits or were they only lugged in occasionally from some where else?

Thirdly, did they all come through to the month of May in good condition? This last item may be unimportant, and he like Gallup and Adair may think it trivial and beneath him to count his hives and allow his pupils to make an estimate of the per cent that was probably saved, and thus decide whether they can afford to build Conservatories for bees alone.

Our readers can rest assured that we shall give the matter a careful test and report from month to month. If it enables us to feed meal in the spring without the usual loss by cold winds etc., we shall think it of much more moment than simply getting them through the winter.

POLLEN.

ITS RELATION TO BROOD-REARING.

FRIEND NOVICE:—As you put me in "Blasted hopes" department, in the July No., I must supplement it by sending you "Reports Encouraging."

From my six puny swarms I have increased to 25, all strong. I could have possibly made 30 but I am learning to move slowly. Our main yield of honey came from basswood and buckwheat, "Linden Avenue" had a few blossoms this season. Besides our increase I have taken almost 250 lbs. of honey. A bee house was to have been built and several other things purchased for the apiary, but 250 lbs. of honey wont make both ends meet and we must wait another year. It is said, and truly, that "adversity enables us to wear out all of our old clothes." So, it will make us figure close in the apiary. Our cellar is being put in prime order for wintering *now*. We shall try natural stores and we are going to keep an eye on friend Bolin, meantime thanking him for the instructive article on page 105. Mr B. is evidently ready to forestall his "Waterloo" and to such a person it will never come, we trust.

Now Mr. Novice we wish to consult a little in relation to pollen. Will it do to keep the Queen breeding until late in the season? In nearly all our colonies in seasons past, the Queen generally ceases to lay almost entirely in Sept. or Oct. Now if we force brood-rearing at this season much pollen is used that would be of use in the spring, the old bees will live until spring, if the pollen is preserved, a quantity of of brood will be capped over quite early, and by the time the old bees die off an army of young ones will be ready to take their places; furthermore may not the forced laying produce unprolificness in the Queen during the next season?

These thoughts present themselves as we perambulate our apiary; we would like to hear from others on the subject. It was very evident that bees hatched late in the fall of '73 died as rapidly in the spring of '74 as the old bees. J. H. MARTIN, Hartford, N. Y.
Linden Avenue Apiary. Sept. 3rd, 1874.

You may be right friend M., in thinking late brood-rearing may deprive a colony of the pollen needed in the spring, but we are inclined to think otherwise.

We have made a greater number of artificial colonies this season than ever before, and in carefully watching the process of building up, we were surprised to find that an artificial colony, started with two frames of hatching brood and bees would in about ten days, or as soon as the Queens began to lay, gather more pollen than any old colony in the Apiary. This has been the case invariably, and even now Sept. 11th, we find our late nuclei "sparkling" with heavily pollen laden bees passing in at the entrance, while our strong heavy colonies seem bringing scarcely any pollen at all. What is the reason? they can certainly find it as well as the others, if they thought it was needed. An examination shows that these old Queens have quite a tendency to cease laying. Is not some stimulus or excitement needed to stir them up? Natural swarms are frequently mentioned as working with greater energy, gathering stores when old colonies were almost idle; now this is precisely the case with our artificial colonies, in fact they even commence comb building out of season, if a space can be found in which to do it.

While we were rearing Queens last fall in the upper stories, these Queen colonies brought in pollen, while the old colonies below, apparently did nothing; had we fed them during Aug. and Sept., as we have done this season, perhaps they might have gathered pollen too. Is there not pollen to be had almost always during warm weather if they can only be induced to gather it? We have noted precisely the state of affairs you mention, viz: an absence of sealed brood or larvæ, but plenty of eggs during weather in the spring in which no pollen could be gathered; we also succeeded perfectly (see page 48 Vol. 1.) in getting larvæ by giving pollen gathered the year before found stored in an occasional surplus comb. These combs were kept in the barn over winter. If put in a cold room we have no doubt but that pollen can be kept over safely; we should fear however keeping it away from the bees in very warm weather. If covered with honey and sealed over, 'twould probably be safe, but if unsealed and damp it frequently moulds. We succeeded in getting them to work on rye to some extent last season in Oct., see page 87, Vol. 1. We do not think the Queen's fertility in spring will be in any way impaired by keeping her busy during Sept. and Oct. In localities where buckwheat swarms and fall pasturage are common in the fall, we cannot find that the old Queens are in spring any less prolific than in other localities. Again, is absence of brood in the spring the fault of the Queen, or the fault of the bees in not using the eggs laid? We think the latter, for we have rarely found a Queen unable to lay as many eggs in March and April as could be cared for.

PROBLEM NO. 25.

NOVICE:—Will you please tell me what it costs a comb to feed bees to build them? Will it pay to feed sugar to build combs when you can buy combs at 25c each? MRS. L. HARRISON, Peoria, Ill.

My bees were in good condition when the honey harvest came, and I intended to take a nice quantity of honey but when it was too late I found I had no place for them to store it in, so I have to put up with what box honey I can get, but I shall have more combs another year. I had extra combs for two hives and have taken 693 lbs. from them already and think I will get a 100 more. LEWIS KELLEY, Smyrnia, Mich.

We wrote Mrs. H. that we though it might cost about 50c each to get combs built by feeding, which would make it cheapest to purchase, but in that case we generally have the trouble of transferring. An accurate solution of this problem is attended with no little difficulty, for whenever comb is built to advantage we have brood-rearing and the syrup will be stored in the comb more or less also. Besides, if the bees are gathering nothing at all, they decrease in weight a little every day, accordingly enough for their support must be taken into consideration. Who can report an experiment that will give us approximately, the expense per square foot of comb built by bees fed on sugar?

Heads of Grain,
FROM DIFFERENT FIELDS.

FRIEND NOVICE:—You ask me if I like the two story hive best? I have not tried the New Idea yet, but thought that I would next season. I hardly think for my locality the long hive is as good as the two story; I shall give them a fair trial next year, but think they would only do for summer. I can't see how they would be any improvement on the Simplicity for spring or winter. I have had splendid *luck* with $1.00 Queens, got one of J. H. P. Brown, one of Hosmer, two of J. Shaw & Son, and all pure; all came safely by mail. Those from Shaw & Son were packed best of any Queens that I ever got.

Bees have been doing very well here for the last two weeks, Buckwheat is in full blossom now and my hives are getting so strong that I think I shall have to divide them more. There have been 3 swarms of Italians in the neighborhood in the last few days.

I had 9 swarms of black bees and 3 of Italians in the spring, about as many bees in them as there would be in 4 good hives, had to feed them until the 10th of May to keep them alive; have now 20 good ones from them; all Italianized and got 486 lbs. honey which I have sold for 25c per lb. Had an order last week for 4 doz. quart jars for Pittsburgh. Sold most of it in Muth's quart flint glass jars, could sell five times the amount of such honey if I had it. Had two hives given me yesterday, the man who had them said they would die with him and if I would take them home I might have them. Had to haul them 15 miles over bad roads, broke down the combs some but the bees were all right; have two good Italian Queens to put in them now and they will make two more for me next spring (if they don't die).

E. W. HALE, Wirt C. H. West Va. Sept. 4th, 1874.

There now we've "ketched it." Our Extractors have been so universally praised on all sides, that we began to think our head was clear on one point any way, and that we knew how to make an Extractor properly if we didn't know anything else. Therefore imagine our consternation on unfolding the following:

MESSRS A. I. ROOT & CO., Gents:—I busted up my extractor on first trial. The shaft broke off just below the wings while in full motion and the racket that ensued caused a rapid getting away of the curious spectators who had congregated to see the thing work. Of course I had to carry back my frames, much to my chagrin but to the evident delight of the bees, for they gathered rapidly upon the comb and sipped the uncapped honey with great gusto. Those who had come to witness the operation, with one accord pronounced it a failure. I was forced to admit that there had been *deception or carelessness* in the making of the machine, yet I insisted that the principle was correct and that honey had been and could be extracted from combs by machines of this kind. But I could not demonstrate it. The machine was quiet enough now. The spectators, one by one, had returned, the boldest first, the timid later; the poor machine was limp and powerless, with its "in'ards" jumbled up like it had had a severe exercise with the cramp colic. I tenderly gathered it up and bent my way to the tinners, followed by the jeers of my valiant friends.

WM. C. GRIER, Lamar, Mo. Sept. 12th, 1874.

P. S.—The tinners fixed it up and nothing could work better. It is just fun to throw out the honey (it cost me two dollars). My friends still pronounce it a humbug because I can't get them to look again to see it work. I suppose they are afraid of another "bust up."

We dropped friend G. a postal "instanter" telling him to make out a bill for all his trouble and chagrin, besides the tinner's charges and we would remit at once; we tell the rest of our readers the same, if they have had any trouble through our carelessness. We have improved and strengthened our machines in several ways since that one was made, and invite reports in regard to their working, for it is only by experience that we can tell where to improve them without adding materially to their weight.

In two story hives, does the Queen occupy only one? Do the top bars of the lower story, the bottom bars of the upper and the space between prevent brood-rearing in both stories? That is, if room is given, will the Queen pass these bars and occupy both stories the same as if no bars were there?

PETER MOYER, Sharpsville, Pa. Sept. 15th, 1874.

The Queen generally gets up into the upper story after a while, and eventually we often get the bees, brood and all above. We suppose it is because the warm air from the cluster rises until it is confined by the roof. This fact we consider the greatest objection to two story hives viz: the lower combs get cold and are apt to be deserted late in the season. The advantage of shallow frames (where they are covered closely) for rapid brood-rearing in spring, is probably owing to this same fact. We always expect in using a two story hive, that the Queen will use both stories.

MESSRS NOVICE & Co.:—I am in a *quandary*, will you please lend a helping hand? Here is my condition; a short time since I rec'd from Mr. H. Alley, a nice Queen, I got her safely into a very strong colony of *hybrids*, have fed freely since her introduction, on syrup; she is now laying. In this climate I have plenty of time to raise Queens from her, but there is not a single drone or any drone drood in any of my hives, or within five miles of me that I am aware of. Forage failed long since, and all drones were at once disposed of. How shall I proceed? Shall I try *first* to rear some drones to fertilize Queens this fall? or shall I rear one or two Queens, let them remain unfertilized and try to keep them over winter in a strong colony to be used as drone layers early next spring, *id est*, if they should lay at all. A dozen or more laying workers, (so some say), are found in one hive at same time, would two or three *drone laying* Queens live upon equally peaceable terms in the same hive? Mrs. Tupper I think reports *one case* at least, where a Queen, reared very late in the fall, when there were no drones, was impregnated the following spring. We are told, that after a Queen attains a certain age without being impregnated, she cannot be fertilized. This may be true in relation to Queens hatched in the proper season. Gen'l Adair tells us that workers hatched late in fall, remain in the adolescent state until next spring, that is, capable of performing all the work proper to young bees for a much longer time than if they had been hatched during the working season. Might not the same thing be true of young Queens, hatched *very late in fall*? Remaining in Gen'l Adair's adolescent or immature state through the winter and still being capable of impregnation on the return of spring. J. H. WILSON Sen'r, Lexington, Texas.

If Mrs. Tupper made the statement you mention, we presume she thought such was the case, but a great number of experiments seem to indicate it an impossibility. Does not Adair's remark like a great part of his writing seem to imply that he is more familiar with long words than with the interior of bee hives? Your only hope is to rear drones by liberal feeding which you should be able to do any month in the year there, for we can rear them here in Oct. When you get sealed drone brood, raise a new lot of Queens. If a Queen is not laying at one month old, you are safe in considering her of no value. Even if rare instances do show certain things possible, 'tis very unwise to calculate on a recurrence of such improbabilities.

While two young Queens are occasionally known to have existed for a time in the same hive, on the other hand 'tis almost a daily occurrence (at the proper season) in large Apiaries to have the first hatched kill all the rest. Even in our lamp nursery when they are without bees, they invariably kill each other, unless quickly caged.

If your bees have not already food for winter, even "*Teakettles*" may not save you now.

A. I. ROOT & Co. Sirs—I sent for a $3.00 Queen and rec'd her about three weeks ago. I introduced her as you introduced your imported Queen, but she got out although I secured the front with wire cloth, as I thought perfectly. I sent for another Queen and in the meantime placed the hive with hatching brood on the stand of an old stock. I rec'd the latter Queen on Monday last and placed her in a wire cage between the frames immediately; 48 hours later I released her and watched her with the other bees, when one bee pulled her by the wings I took her away and caged her again. This morning about 10 o'clock I opened the hive, smoked the bees and sprinkled with sweetened peppermint water. I released her and watched the bees on the combs for some minutes. They persist in building Queen cells but I have repeatedly cut them out; now, 1 o'clock, I have just been out to look at them. I left the sheet spread out in front to see if they killed the Queen. When watching the bees with the Queen this morning I perceived no hostility and left them. I looked at them repeatedly but now at 1 o'clock, on examining the bees carried out I find her dead.

MRS. MORGAN, Elyria, O. Sept. 4th, 1874.

We get altogether too many reports like the above. Although it seems our friend did all that could be done with the latter Queen, she certainly deserves some censure for letting the former get away. Until bees enough have hatched to gather around the Queen and make her contented to remain with them, say 24 hours or less, they should be carefully fastened in. No need of wire cloth for this, as they need no provision for ventilation, but the hive may be made tight by crowding cloth or paper into the entrance. Any decent hive can be made perfectly secure in this way with but little trouble, and if the young bees have never seen any other Queen they will always accept the one furnished. It seems to us this method is always a perfectly safe one. We have always had much trouble in introducing Queens late in the fall by the caging process; they will sometimes destroy them after they have been laying a week or more, therefore, keep all old bees away from a valuable Queen if she is rec'd late in the season.

On the 10th of July my two last natural swarms came out and lit on an apple tree within three feet of each other in a difficult position to hive. I finally got them hived all right and separated, but must have got the two Queens in one hive, for in four or five minutes after hiving, bees left one hive and went all together. I opened them the last day of Aug. and found them full of beautiful combs and full of honey, and knowing it would be to their interest I extracted two gallons of nice thick honey from them. This may not seem very large to you but it is so much better than I ever experienced in the swarming line I had to tell it. I have had black swarms come the middle of July and not half fill their hive.

WM. PAYNE, Spencer, Medina Co. O.

This report is encouraging for the Italians, as the month of August here, is almost without exception, not a honey month.

Will a Queen reared from a pure bred purely fertilized Italian Queen mother produce *any* entirely black bees? I have reared Queens for ten years and never had a Queen that was reared from a pure mother of my selection, to produce any black bees whether mated with an Italian or common drone.

J. A. BUCHANAN, Wintersville, O.

Our experience is about the same. Our first Queen from Mr. Langstroth stocked our Apiary with Queens that produced two or three banded bees, but no black ones. In selecting one of these daughters to breed from the next season, we had colonies producing some bees all black, and the whole of them so cross that they they positively were enough to "make a preacher——"ahem, get out of patience. Since then we have had more or less of the cross black bees every season until we reared from our Argo Queen; her daughters produced no black bees so far as we know, and our present Imported Queen's have produced none. Hence the position we have taken for years, that so far as honey was concerned, if we could only be sure of having all Queens reared from one of *known purity* it matters little what drones they meet. The following is just to the point. Probably any one of us would be satisfied with the yields of comb honey mentioned:

I have taken off all my box honey now and have in the neighborhood of 1800 lbs. of box honey and 500 lbs. of extracted, from 22 colonies in spring. My best hive gave me about 200 lbs. comb honey, and two or three others gave me 160 lbs. and upwards; I had other stocks that gave me but very little box honey, they were the light colored, very handsome, very gentle, very pure Italians. We find that a little dash of black blood is a great improvement in box honey workers, but we don't want enough black blood to prevent striping all the workers. When we get a light colored pure Queen, mated with a drone from an impure stock, it shows in the increased activity of the stock, and when we raise Queens from that stock, we get just about the color we want. Our plan now is to breed from the most industrious stocks both Queens and drones and no others.

J. P. MOORE, Binghampton, N. Y.

Yesterday I transferred a lot of grubs from cells started in a hive containing old black comb, to some cells I found started on new comb, and gave some to Queenless nuclei. To-day I find them all right and much lengthened out and well supplied with royal jelly. Some of the larvæ were pretty good size, some just visible. J. A. BUCHANAN.

Did you ever! From this, it seems that all we have to do when we want a Queen, is to hunt up some old Queen-cells, put a small larvæ from our choice stock into each, and simply put them into Queenless colonies. Can't some one whittle out wooden Queen cells,—like wooden nutmegs—and thus save the bees the labor of building them?

Davis' Transition Process really amounts to more than even we had anticipated. Both cells (mentioned last month) to which we transferred larvæ, have produced fine Queens. If there are to be *no* failures 'twill be a novelty in Apiculture.

Friend B. sent us 50c for an unfertile Queen. As we had finished for the season, proposing to bend all our energies to the work of wintering those we had, we had no choice but to go to work and raise him one; this we did simply as follows: We put an empty comb in the centre of our imported stock and left it four days, then it was put in a Queenless colony that was waiting until we could get a laying Queen for them, and left *three* days at which time the Queen destined for them had commenced laying. Now as it was late in the season, they must have the Queen at once, and yet we did not want the Queen cells (of which there were 7 in an unsealed compact cluster) destroyed. To accomplish both, we moved the cluster, with the cells, to the north side of the hive and placed the laying Queen with two of her own combs with brood bees and all on the south side, filling between the two with empty combs. As we expected, the Queen cells were all properly sealed in three more days—10 days in all from the egg—and as we had no farther need of bees, the comb without bees was taken to the lamp nursery. Observe that we only kept a colony Queenless *three days* to get this lot of Queen cells. After six days more, 16 from the first eggs, two Queens hatched at once and one killed the other. We examined them hastily, morning noon and night; the survivor—when we could catch her—was put in a cage with a few just hatched bees from another hive, and mailed as above. On receiving her he wrote as follows:

Since writing the above I have rec'd the Queen. I must say I have never before seen so neat and convenient a shipping box as the one you use; bees and Queen clean and lively. The Queen looks to be fertile; was she before mailed? She was introduced safely immediately.

The other five Queens were equally strong and finely colored,—none of the small black ones—and royal jelly was left in each cell. The temperature was kept the whole six days at from 90° to 100°, in fact "P. G." declared they would all be baked, but they were not. The workers of course did not hatch until four or five days more, so we had nothing but Queens in our nursery, unless forsooth the moth worms be counted that hatched and flourished with provoking vigor. We think 100° about the right temperature.

By permission of D. Lyons Browne, of Indianapolis, we give the following extract from a letter rec'd by him.

I have been engaged in a number of industrial pursuits for 40 years and I must say to you frankly, that bee-keeping is my favorite both for pleasure and profit. I am now running 1200 acres of good land. Broad acres of waving grain and grass, herds of cattle, sheep and horses, are a source of pleasure, but nothing in comparison to the apiary. To hear their busy hum and behold their economy and industry, smell their sweet perfume and share with them the proceeds of their and our industry is a pleasure to me beyond description.

I have realized over $10.000 in sales of bees and honey; more than in any other business in proportion to the capital invested. Last year I averaged $81.00 per colony. I do not expect to reach that amount this year as I did not give the attention required to produce such results.

SETH HOAGLAND, Mercer, Pa. July 11th, 1874.

If the number of colonies that produced this average was considerable, it certainly was a great result; too great for us novices to aspire to for years to come.

My cellar ranges from 34 to 40°—when above 40° the bees are restless. Until the past winter I have been in the habit of opening a window on north side and door on south (at night) and leaving open till the temperature reaches 32°—would close this once a week. I think bees need pure air as much as humans. This winter I think I will have a tube run from cellar to stove pipe in room above, this will create a draught and carry off the impure air. Where bees can be taken out and have a good fly—say in January and put them back, they will then go to breeding and keep it up. I know they will consume more food but then they will have bees to make it up when the flowers come. There was less brood in my hives when I took them out in March than there usually is in January. I did not know how to account for it, unless it was that their supply of honey and pollen was less in quantity. It makes them feel good to have say 40 or 50 lbs. of honey in the hive, and if you intend to have a big start by the 1st of June it will take about that much to take them from Oct. 1st to June 1st. It is very easy to start a home market for extracted honey by putting it up in an attractive form—say in jelly glasses with a piece of comb in; such as C. O. Perrine *wholesales* at $4.00 per doz. The glasses hold about ¾ lb. of honey. I told my grocery man to retail at 25 cts.—they go off like "hot cakes"—3 lb. fruit jar $1.00, and pay 10 per cent commission. Quart jars cost $1.75 per doz., ½ pint jelly glass, tin top $1.00 per doz. The first I bought cost 75c, and were the neatest, but I could get no more of them, they were sold too low, but to buy at the factory and a gross or two at a time is the way to buy them. T. G. McGAW, Monmouth, Ill.

Please let me know through GLEANINGS, if the quilt in winter in the cellar should lay flat and tight on the frames? if not how should it be? Two of the quilts are all waxed over on the under side. Will they do for wintering.? C. KENDIG, Naperville, Ill.

We use the quilts flat on the frames the year round. Waxing, or covering them with propolis seems to do no harm only that 'tis more trouble to remove them, when opening a hive. Laying a strip across the frame under the quilt to give the bees a passage has been recommended for winter, and friend McGaw of Monmouth, Ill., lays an empty frame underneath the quilt. We have made some similar experiments but discovered no especial advantage.

Do you think bees can be taken from Detroit about the 15th of Sept., with no honey and little comb in hive, put on cars, fed and watched on route, carried to some good locality about the range of Northern Georgia and *after that* gather honey and bee bread sufficient to keep them through the winter? Can you from personal knowledge recommend some locality?

M. H. CLEMENTS, Belleville, Mich.

P. S.—Can you give P. O. of some bee-keepers in that section?

We have had considerable correspondence on the subject and would particularly refer you to M. S. Klum, Sherman, Grayson Co., Texas, and R. Wilkin, Oscaloosa, Iowa. Candidly, we fear it will not pay, still some experiments might be advisable. Shipping bees is as yet too risky a business to expect them to be handled as they should be.

Do you put anything into the syrup to keep it from candying? Did you know any trouble with that that you say you are now feeding to swarms you are building up? I mean those that you have wintered, and partly summered. Will honey sour if extracted before being sealed? If so how do those manage who extract once in three days? Can it be evaporated to make it thick without injuring the flavor?

JOSEPH SINTON, Ithaca, N. Y. Aug. 5th.

Sugar and water only. The combs containing syrup fed last fall, even when used in Aug. of the present season were appropiated for brood-rearing without waste. It is seldom that honey is gathered thin enough to sour, even if you do extract every third day. Should you happen to get any that is too thin it can be ripened into perfectly good honey by keeping it several days in an oven or other warm place. The flavor is unchanged unless it is heated to the boiling point. As this artificial ripening is a slow job, we think it most profitable to let the bees do it. A very strong colony will get the honey ripened and much of it ready to seal in three days. The only sure way of telling when you should take the honey, is to go over a few hives and see if the honey obtained is ripe enough to suit you. Thick honey is heaviest and will eventually, if it does not now, command the highest price in the market.

GLEANINGS came to hand on the 3rd and is full of valuables. I notice you advise feeding sugar immediately for winter use. I intend to winter on sugar but what shall I do? Nearly our best honey season is coming yet. Golden rod and Iron weed are our best honey plants after June. If the weather is favorable will I have to lose the crop or can I wait two weeks longer to feed? If it should not be sealed up until too cold weather could I not take them in a warm room to seal it? A. T. WEIDNER, Bigler, Pa.

We certainly would not want to lose any yield of honey that might come any time when bees could gather it. We know of no plan except the one given on page 108 last month viz: make them store the late honey in empty combs placed on both sides of the central combs containing the brood and sealed stores, and empty their temporary combs as fast as filled, or extract all unsealed stores. We think we should prefer sealed honey to unsealed syrup. One or two wrote last winter saying their bees were doing finely on unsealed stores notwithstanding all that had been said against it. Late in the spring one of the most sanguine of them wrote as follows:

DEAR NOVICE:—My bees have all gone to the d—d—d—dogs this winter; did not have one left when the weather became fine enough for bees to fly. So I have commenced afresh with 17 swarms that I bought last week, all natives. Now Sir how would it work to winter bees in this way, say have both stories on with the bottom story empty, no frames nor comb in it, have combs frames and bees in the top story with a straw honey board on the top, and sun cap over that, and place them on the south side of an 8 foot high tight board fence. I think of trying this plan next winter if you are in favor of it. My experimental swarm I spoke of last winter, in the room, did not increase the least; the young bees would not come to perfection from some cause or other, and I could not keep my store room in which I kept my bees, cool enough to keep them quiet, and through fooling about with them lost them all.

M. RICHARDSON, Port Colborne, Canada.

The plan you mention friend M., has been tried, and gives no especial advantage. A strong colony often winters well in this way, as they do in hives without bottom board at all, but much more food is consumed.

It should be borne in mind that a very strong colony can be safely fed, later than a weak one; if their hive is *full of bees* they can evaporate and seal up, but beware of giving a feeble colony in a large hive a large amount of stores, after the weather has become too cool for them to ripen it. All such experiments, so far as we can learn, as taking bees into a warm room in the winter time have proved failures. What will be accomplished by utilizing the heat of the sun's rays in winter time remains to be seen.

Some writers claim to have Queens hatch in 9 days, I never had one hatch in less than 10 days—unless it was the first lot I ever raised, and I have often thought the mistake was mine. Never have seen one of the Queens that only live two or three months. How long will a fertile worker live? G. M. Doolittle wrote a number of years ago, that a pure Queen mating a black drone would never show any black bees among her worker progeny. I have had a good many Queens that mated impurely whose worker progeny never showed any black bees.

T. G. McGAW, Monmouth, Ill.

DEAR NOVICE & Co.—Just now with us, it is distressingly *hot* and *dry*, not a particle of honey in the fields, still the bees are flying at a rapid rate. Do you ask what they are after? I answer *water, water*. Writers tell us, as well as our own experience, that bees require water to prepare food for the grubs. With me, breeding for the present is suspended, no grubs to be provided for, still the bees drink an immense deal of water, they require it for their *own bodies*, they also furnish the *Queen* with a liberal amount. My close daily observation this summer has fully satisfied my mind, that many, very many Queens sent by mail and express, during intensely hot weather, are lost while "in transitu" solely for the want of *water*. I am not a Queen breeder, but an occasional Queen buyer, and hence, feel an equal interest with the breeder in safe transportation.

J. H. WILSON, SEN. Lexington, Texas.

If you allow your bees to be entirely without brood in Aug., we fear we shall have to consider you a bad bee-keeper. Why don't you get ready for the yield that is coming? Water is a very good thing no doubt, but aint it rather "thin" for a regular diet? Joking aside friend W., we presume you know your own business best, but we have been so well pleased with the plan of keeping things lively this season, with sugar, that, we don't like to think of their being idle during warm weather. Our friend Dean who has had such success in sending Queens great distances, gives them nothing but honey in a sponge. A sponge filled with water does not answer for long distances; it evaporates and the sponge is dry, while the honey remains unchanged.

I sent to Mr. Alley last year and got an Italian Queen, she lived till May this year, then was missing. Bees raised five Queen cells, the Queen they saved was lost in bridal trip. Then I was plagued with a fertile worker and they actually made Queen cells on drone eggs. I gave them a black Queen and after she had laid a quantity of eggs, she disappeared and they raised another Queen which now reigns I suppose. Now I have been plagued with that hive beyond account, and if I had not kept it up with brood and bees it would have gone up ere this time.

JOHN DAWSON, Pontiac, Mich.

We dare say you have had far more trouble with the hive than if you had made an examination of it once in every week, or two weeks even. Fertile workers never make their appearance in a well conducted apiary, and they may almost be considered as only an evidence of inexcusable carelessness. If a Queenless hive has fresh eggs given every week or ten days, they will never appear; they are only seen when the colony has no Queen, and no means of raising one. With proper hives, we can remove a frame from the center of the cluster and see if the Queen is all right, in five minutes at least, and he who cannot take this trouble whenever the deportment of the bees outside seems to indicate a want of thrift, deserves to have trouble. We are well aware friend D., that you are not the only one who allows a hive to go, "weeks" without a Queen, but it is assuredly at a loss, for all that.

You say you *suppose* they have a Queen now, we advise you to suppose nothing about it but look and see, *at once*.

Please tell me whether a stock will be any more likely to accept a strange Queen after having been Queenless for a time?

ILA MICHENER, Low Banks, Ontario, Canada.

We think as a general thing they will. Should they however have been Queenless so long as to induce fertile workers, the case would be different. A steady yield of honey has more to do with a favorable reception than any thing else we know of. Regular, liberal feeding until comb building has commenced, we think comes next to it.

Can Queen bees be sent from Ohio to this place through the mails? If so what would each Italian Queen cost me here, and how soon in the spring could you furnish me with a small number? Bees begin swarming here the latter part of Feb.

D. F. McFARLAND, San Diego, Cal. Sept 3d, 1874.

We think our friend Dean, of River Styx, will send them without trouble, but it is difficult to furnish dollar Queens here before July.

Some one asked you the question—will it do to winter in the *long* hives? I believe you answerd, yes. Shall we give the bees the whole length of hive, giving them plenty of honey, pollen, and a few empty combs in middle? or shall we restrict them to a limited portion of hive, giving them the balance of room in spring as they may need it? J. H. WILSON, SEN.

We have had no experience in wintering in the long hives, and are therefore unable to decide. We should favor a division board, having uniformly had much better success at all times of the year, when the hive was of such size that the bees filled it completely.

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal for	$2.25
" The Bee Keeper's Magazine "	1.75
" The Bee World "	2.25
" All three, The Bee Journals of America,	5.00
" American Agriculturist ($1.50)	$2.00
" Rural New Yorker ($2.50)	3.00
" Ohio Farmer ($2.00)	2.50
" Scientific American ($3.00)	3.50

Books for Bee-Keepers.

SENT postpaid on receipt of price.

Langstroth on the Hive and Honey Bee	$2.00
Quinby's Mysteries of Bee Keeping	1.50
Bee Keeper's Text Book, muslin,	.75
" " " " paper,	.40

Good Books.

These, though not specially designed for Bee-keepers, have a tendency to inculcate principles that ensure success in bee-keeping as well as almost all other rural pursuits.

The first on the list should be in the hands of every one who has planted grape vines to shade the hives, as we have advised.

Any of these books will be forwarded by mail, *post-paid*, on receipt of price.

Fuller's Grape Culturist	$1.50
Fuller's Small Fruit Culturist	1.50
Fuller's Strawberry Culturist	.20
Fuller's Forest Tree Culturist	1.50
Henderson's Gardening for Profit	1.50
Henderson's Practical Floriculture	1.50
Tim Bunker Papers	1.50
Ten Acres Enough	1.25
Roosevelt's Five Acres too Much	1.50
Art of Saw Filing (Holly)	75
Window Gardening	1.50

Averill Chemical Paint.

THE *ONLY* RELIABLE.
THE *MOST* BEAUTIFUL.
THE *MOST* ECONOMICAL.
THE *MOST* DURABLE.

Requires no oil thinner or drier,
Requires no waste of time in mixing,
Has stood *eight years' criticisms*
With *yearly increased popularity*
And *yearly increased* sales.

Is sold by the gallon only, in packages of from 1 to 40 gallons each, in Purest White and any Color or Tint desired.

Address, for sample card of colors and price list,

Averill Chemical Paint Co.,
Office and Factory 132 & 134 East River Street,
CLEVELAND, OHIO.

PLEASANT AND PROFITABLE EMPLOYMENT, for male or female, in every city of the Union. Active persons can double their small investment every day. Inclose STAMP for particulars to
THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Also full colonies of Italians in Langstroth hives for sale at $15.00 per colony.

Address DR. J. P. H. BROWN, Augusta, Ga.

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular. Wm. W. CARY,
1tf Colerain, Franklin Co., Mass.

GOOD Rye Straw Mats for $3.00 per dozen. Sample by mail 50 cts.
9t12d A. N. DRAPER, Upper Alton, Ill.

Choice Italian Queens.

A fine lot of **tested** Queens at $4.00 each, reared from the Imported stock of the late T. B. Hamlin. Full colonies for sale.
9t10$1p FRANK BENTON, Edgefield Junction, Tenn.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

G. W. Dean, River Styx, Medina Co., Ohio.
W. J. Hosmer, Janesville, Minnesota.
Dr. J. P. H. Brown, Augusta, Georgia.
R. S. Becktell, New Buffalo, Mich.
H. Nesbit, Cynthiana Harrison Co., Kentucky.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

J. H Martin, Hartford, N. Y.
Geo. T. Wheeler, Mexico, N. Y.
R. S. Becktell, New Buffalo, Mich.

In order to hasten the introduction of the ☞ STANDARD ☜

Apiarian Implements, we make the following offer. Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground $2.00
Twenty frames for above 5¾ c. each 1.15
Sample Frame, by mail 10
Quilt 40
Or all complete except painting, for 3.50
The same in a bundle including nails, hinges etc, 3.25
Extractor made expressly for Standard frames. (Comb frame 14¼ wide, by 10 deep.) $9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

AMERICAN BEE JOURNAL. Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

Clark & Holcomb, HONEY LABEL PRINTERS,

Medina, - - -Ohio.

PRICES:

1000, Gummed and Cut,	$2.75
500, " " "	2.00
250, " " "	1.50

Sent post-paid on receipt of price.
Samples sent if desired. Address,

CLARK & HOLCOMB, Medina, O.

USE Canvas for making the "Universal feeders".

ONLY $2.80 *at the Factory*, for 6 doz. Honey Tumblers, case included. See Advertisement.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,	$6.50
Two " " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross,	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,	19.00
Labels for above, " "	.65
The same with printed address, per 1000	4.25

I shall have on hand and ready for shipment from the 15th of June, a large lot of 1 and 2 pound square flint (white) glass honey jars. They are of the same style as my other jars, which are by this time well enough known.

I shall sell 1 lb. (white) flint Glass Jars per gross	$9.00
2 " " " " " "	11.00

In lots of 10 gross or more, the same as the others, 50 cts. less per gross.

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

UNCAPPING KNIVES.

As good as any.

Each	.50
Per doz	$4.50

For further particulars, Address,

1tf CHAS. F. MUTH, Cincinnati, O.

THE BEE WORLD.

OUR Bee Journal of the Southern States. Issued monthly at $2.00 per year. Sample copies free.

Address A. F. MOON & Co. Rome, Georgia.

NORTH AMERICAN
BEE-KEEPERS' SOCIETY.

OFFICERS: Seth Hoagland, Mercer, Pa., President; Abner J. Pope, Indianapolis, Secretary; J. S. Hill, Mt. Healthy, O., Treasurer; D. L. Adair, Hawesville, Ky., Cor. Secretary. With one Vice President in each State, Territory and Province.

The Society will hold its Fourth Annual Session at Pittsburgh, Pa., on the second Wednesday, (11th day,) of November, 1874.

The payment of $1.00, annually, entitles to Membership, and a copy of the Transactions, when published.

Italian Queens by Mail.

THIRTEEN years experience. After August 7th, I will send Queens warranted pure etc., for $1.50 each. H. ALLEY, Wenham, Essex Co., Mass.

NEW YORK HONEY HOUSE.

No's 208, 210 and 212 South Fifth Avenue, Corner of Grand Street.

Cash on delivery, paid for Honey.

9t11d S. E. SPAIDS.

STRAW Mats $4.00 per doz. or single one 50 cts. Sample mat by mail 65 cts. State the exact size of mat required.

Catnip seed from plants cultivated last season $1.00 per oz. or $12.00 per lb.

9t11d Address M. NEVINS, Cheviot, Ohio.

IMPORTED QUEENS.

JUST received, Imported Queens from the best district of Italy. Price:—One Queen $10.00, two $9.00 each. Orders filled immediately on receipt of price. Safe arrival guaranteed. Home bred Queens also for sale. References given if required.

9p CH. DADANT & SON, Hamilton, Hancock Co. Ill.

GLASS HONEY JARS.

1 lb Round Jars per gross	$5.50
2 " " " " "	7.50
Corks " "	75c to 1.00
⅓ pt Honey Tumblers plain or ribbed per doz	.40
Six doz. in a box. Packages each	.40
½ pt Honey Tumblers plain or ribbed per doz	.50
Six doz. in a box. Packages each	.45

Also, Window Glass, Lamp Chimneys, and Glassware of all kinds. For sale by B. L. FAHNESTOCK. Late B. L. Fahnestock, Fortune & Co. Glass manufacturers, 76 Wood St. Pittsburgh, Pa. 9d

FOR 50 CENTS we will send **The National Agriculturist,** a large, live, 16-page illustrated family paper, six months on trial, or with large first class chromo *Flowers of Paradise*, 15½ x 21 inches, for $1.00, and extend the time six months free to agents sending subscribers, besides large cash commission or premiums. **The Bee-Keepers' Magazine,** same terms. Terms to Agents sent free. Address **H. A. KING & CO., 75 Barclay Street, New York.**

QUINBY'S NEW SMOKER.

ALL who expect to manage bees successfully, will want the best method yet devised of using smoke. By putting old rags, rotten wood, or other material in a tin cylinder, and working a small bellows with one hand, smoke can be directed to any point, in quantities to suit. Price $1.50. Sent by mail $1.60. They are now improved by being made without solder.

Send for circular and price list. 7tf

M. QUINBY, St. Johnsville, Montgomery Co. N. Y.

NEWSPAPERS Through our Club Cheap.
NEWSPAPERS We furnish all Magazines.
Leslie's papers, regular price $4, our price $3.40. All other papers equally cheap, some cheaper.
BOOKS All kinds, to members of our club at
BOOKS 1-5 less than retail price.
Address for CLUB LIST and BOOK circular:

E. KRETCHMER & Co. Coburg, Montg'y Co. Iowa.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Lithograph of Apiary, size 12x16, Mailed Free, Postpaid, $1.00, or Lithograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume I, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. II November. 1874. No. 11

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke, and Mrs. Tupper.*

Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

[Also Bound Volumes of the former since 1860, and Files of all other Bee Journals that have been Published in America.]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

"Novice's Wind-Mill Print," Medina, Ohio.

CONTENTS:

Page.
How to Conduct an Apiary....................121
Uniting colonies....................121
Primary Department....................122
Brood rearing....................122
Doolittle's Report....................123
Our Own Apiary....................123
Division boards....................123
Bees and things away over the water........124
Honey resources and Bee-keepers of the Shenandoah Valley....................124
Flying bees in confinement....................125
Pollen and brood....................125
Editorial....................126
"Flying bees under Glass"....................126
Making a hot-bed for bees....................127

Page
Honey Column....................127
Report of Adam Grimm....................127
Humbugs and Swindles....................127
Bee Stings etc....................128
Heads of Grain....................129
Why do bees gnaw down Queen cells?........129
Why do the hives smell sour?....................129
Moving bees for fall pastureage....................129
Blue Thistle....................130
Catnip Honey....................130
Old carpet for Quilts....................130
Want of pollen in winter....................130
Are "dollar Queens" inferior?....................132
Box honey....................132
Losing Queens while extracting....................132

ADVERTISING NOTICES AND SUNDRY OTHER MATTERS.

A. B. J. at hand Oct. 5th, *B. K. M.*, Oct. 12th, and *World* not at all.

Catnip is coming into favor. See advertisements of seed.

Mr. A. H. Peake, Seville, Medina, Co. O., offers maple punk put up in packages at 12c each by mail post paid.

Nesbit can raise bees cheaper than any body else, but we fear his stock won't hold out long at $8.00 each.

The National Agriculturist and Bee Journal has dropped the latter part of its title and is quite a pretty family paper for the price. See clubbing list.

We are pleased to learn that our old friend Alley, who has done so much toward disseminating the Italians has now turned his attention to hive making. See advertisement.

Philip's Southern Farmer is a live Monthly, devoted to Southern Agriculture and kindred topics. Our friends Murray and Adair are special contributors to its Apicultural department. Terms $2.00. Memphis, Tenn.

Those interested in planting any kind of Forest Trees should send for Mr. Battle's neat pamphlet and price list. He has long been before our people, and we believe is perfectly reliable. See advertisement.

C. O. Perrine has, so far as we know, made a satisfactory settlement of all old debts. Considerable credit is certainly due him for his early efforts in creating a ready market for honey in large quantities.

"Dollar Queen" orders are all filled, or the money returned, with one exception, the writer of this requesting money to be kept over until next season, so that he would come first. If any thing has been overlooked on our part don't be backward in speaking out (on a "postal.")

Candidates for the Humbug and Swindle Dep't should bear in mind when writing us, that we usually have a number of *their own* letters to their customers in our possession. If they would do so, it would often prevent the ridiculous inconsistencies to be seen when their letters are compared.

Will those dealing in Apiarian Supplies please send in their catalogues and price lists. We shall in our next, endeavor to give a list of all reliable persons who deal in supplies for the Apiary, of any description whatever. Those of our advertising patrons will receive a more extended notice.

Mr. J. L. Green of our own County, who advertises trees in this No., we take pleasure in recommending to our friends. His many year's experience with trees enables him to send these safely even to the extreme Southern states or California. Basswood trees, of which he makes a specialty, he informs us are preferably planted in the *fall* in sandy soils, but for clay, he would recommend spring planting.

All seem to agree that Italians should be three banded, but we fear some do not know just how the three bands should lie, and have consequently complained of bees that were well marked. The first band is located so close to where the body joins the part to which the wings are attached that it is sometimes overlooked, and in fact it is sometimes scarcely visible unless the bee is full of honey. The second band is generally plain and well defined even in poor hybrids; the third wholly or partially disappears where a pure Queen mates with a black drone.

Several correspondents have sent us their Photo's, and the pleasure of seeing some one with whom we have long held pleasant converse is well worth all the expense. Now we have a great many friends, (perhaps more, we don't know) and we would like their pictures very much. By the way we rather think we would like the pictures also of some who are not so friendly. Pictures never quarrel, and here comes in the point. A hundred Photo's taken separately would cost about $25.00 which amount we are sorry to say is more than we would like to stand, but if they were nicely grouped the whole might be photographed for $1.00 at farthest. Now if you'll send us your pictures we'll get up a Bee-Keeper's Medley.

BASSWOOD TREES

One foot and under, per hundred	$2.00
From one to two feet	5.00
" two " six "	8.00
" six " ten "	15.00
" ten " fifteen	30.00

The one foot and under, sent by mail for 75c per hundred, extra. General nursery stock, such as Fruits and Grape vines of all kinds, Apples and Cherries. Evergreens, Osage Orange plants etc., for hedges, specialties. Maple trees also at low figures.
11t12p J. L. GREEN, Granger, Medina Co. O.

TULIP, Linden, and other honey producing trees. Send for catalogue.
$1p A. BATTLES, Girard, Pa.

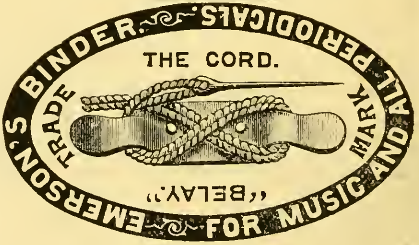
BEE Hives and surplus boxes of any style in use, or anything used about the Apiary, furnished at the lowest prices. H. ALLEY, Wenham, Mass. tfx

---

CATNIP Seed, fresh and good, 50c per ounce.
J. L. WOLFENDEN, Adams, Wal. Co. Wis. 75p

TWENTY colonies Italian Bees at $8.00 per colony if taken before 15th of Dec., (too cold to ship after that). Strong in bees—heavy in honey—straight combs—"dollar Queens"—delivered at shipping office this place.
11t12 H. NESBIT, Cynthiana. Harrison Co. Ky.

CATNIP Seed for sale at $4.00 per lb. Address
A. A. RICE, Seville, Medina Co. O. 11tf



You cannot look over the back No's of Gleanings or any other Periodical with satisfaction, unless they are in some kind of a Binder. Who has not said—perhaps only mentally—"Confound it I *must* have last month's Journal and it's no where to be found." Put each No. in the Emerson Binder as soon as it comes and you can sit down happy, any time you wish to find any thing you may have previously seen even though it were months ago.

Binders for Gleanings (will hold them for four years) gilt lettered, free by mail for 50, 60, and 75c, according to quality. For table of prices of Binders for any Periodical, see Oct. No. Send in your orders.
A. I. ROOT & CO. Medina, O.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. II. NOVEMBER 1, 1874. No. XI.

HOW TO CONDUCT AN APIARY.

No. 11.

IT is with considerable hesitation that we undertake to advise at all as to what shall be done in the Apiary this month. If any colonies are without food now, perhaps the only thing that can be done is to unite them until they have sufficient. About the 20th, in this locality is the proper time to put them in-doors. Reports seem to indicate that nothing is very well decided in regard to what the frames shall be covered with. Some ventilation to carry off the moisture seems many times absolutely necessary, and straw mats perhaps furnish the proper amount better than anything else. Quilts would probably come next if not too much covered with propolis, and even then, where they are not glued down too closely around the edges they often do very well. Many also seem to be quite successful in using only the old fashioned honey boards. Lest the bees might get damp perhaps they had better be raised slightly at the back end, say the thickness of a 6 penny nail for instance. This ventilates between all the combs more effectually than openings in the board. The need of this ventilation is only during the coldest weather.

Where bees can fly frequently, or after March 1st, in our locality, we would have the covering over the frames as tight as we could possibly make it. Leaving an empty space beneath the frames seems to give no positive advantage, and for wintering the Simplicity hive perhaps 'tis as well to carry in bottom-board and all, simply removing the doorstep. To avoid carrying in a lot of dirt sticking to the bottom boards 'twill be well to raise the hives up from the ground on thin sticks after the flying season is about over, and before much wet weather has set in. If the hives stand permanently on a square frame of inch sticks, they will always be ready to be lifted without carrying rubbish along with them: we would not have the hives more than one inch from the ground in the working season.

The following is just at hand:

> I don't want a "horse and wagon" nor a "penny whistle" but help. I have 13 stocks of bees in Langstroth hives, one or two of which are not strong, and I wish to unite them with others. Now what I wish of you is to inform me in plain terms how to do it safely. The other day I was examining a hive, the first frame taken out I laid near the hive and when I was done, put the frame back in its place, with about a handful of bees that I took to be robbers, and the next morning I found about that number dead on the alighting board; and I am afraid if I unite a large quantity they would be treated in the same way.
>
> JOHN OGIER, Baltimore, Md. Oct. 5th, 1874.

After cool weather has set in, simply kill the poorest Queen if you have a choice, and then lift bees comb and all, from one hive into the other. If they are allowed quietly to remain on their own combs, we believe they never sting each other. Close up the hive and let them "fix it" when they get ready. If you cannot manage to get each colony on five combs, go to both the day before uniting and remove all but five of the most desirable combs, placing the combs of one of them in the middle of the hive. Next morning while it is yet quite cool you will find all the bees on the combs and they can be then carried to the other hive, losing scarcely a bee. If the weather is warm soon after this, some bees will go back; these will cluster on an empty comb if it is given them, and can then be taken back at night. After a few days cool enough to prevent flying most of them will remain. Caging Queens in cold weather is so risky that we would not advise it even though a Queen be killed occasionally in uniting. We would *not* advise any one to purchase or attempt to introduce Queens, in Oct. or Nov.

Most of our readers are probably aware that a strong swarm will stand almost any degree of cold for a short time with no apparent harm, and that out-door wintering would on some accounts be the most desirable, were we sure of having a "warm spell" as often as once in ten days or two weeks, to allow the bees to exercise, and to bring a fresh supply of unsealed honey into the cluster. Bees seem to find difficulty in going over to another part of the hive among heavy sealed combs, during zero weather. Quinby argues in view of this, that unless bees can be housed in a warm place, they had much better be left out, to take the chances of occasional sunshine; and also, that unless we have as many as 50 in one room we cannot expect it to keep above freezing. Therefore, a wintering house, if it is to contain less than 40 or 50 stocks, must have walls so thick and warm that it would be like a cellar, almost or quite frost proof if it contained no bees; otherwise your repository is in danger of being little better than an open shed on the north side of a barn, in fact the very worst place you can select. Covering hives with straw, or corn stalks, just enough to exclude the sun is about as objectionable. They are partially shielded from the winds 'tis true, but does this compensate for the loss of the sunshine?

During the past winter a neighbor (A. A. Rice, Seville, this Co.) gave his "a fly" four or five times during the winter, and the whole, 30 or 40, came through in excellent condition. Two reasons prevent us from recommending this course generally; one is, we seldom have warm days at intervals as we did the past winter, and the other is that so much disturbance in mid-winter with the chances in favor of sudden and unexpected changes, would be pretty certain to make mischief among *novices*, to say nothing of the back breaking task of so much incessant lugging hives about.

OUR PRIMARY DEPARTMENT,

Or First Principles in Bee-Keeping.

[Designed especially for the veriest novices, and those who know nothing of bees whatever. Conducted by a fellow Novice of several years experience replete with blunders, as well as with occasional successes.]

USUALLY the first work in the Apiary commences about April 1st in this locality. If the hives have been wintered in cellars, or special repositories they are generally put on their stands in March or April. The great point in bee-keeping is to have an army of workers ready for the blossoms when they come out. To enable us understandingly to go to work to secure this we shall have to consider something of the Natural History of the bee. As we have before mentioned, the Queen lays all the eggs. These eggs are deposited in the bottom of the cells to which she attaches them by some glutinous matter so that they stick in the center of the bottom with considerable force; she commences to deposit these eggs about the first of Jan., and continues to deposit more or less daily for at least the next ten months of the year. It has of late been discovered that only a very small number of the eggs ordinarily produce bees, more especially those laid in the winter and spring months, although we believe every egg is capable of producing a perfect bee if it has proper care from the working bees. Now when we take into consideration that the yield of honey that may be obtained from a hive directly depends on furnishing the proper conditions for these eggs to hatch, we see the importance of being able to assist nature intelligently. Perhaps the first essential is to give the Queen a brood nest in the center of the hive at a uniform temperature of from 90 to 100 degrees; in the present stage of our knowledge we know of no other way to secure this with all other requisite conditions than to have a large cluster of bees surrounding the Queen, and covering the combs. The eggs when kept at the proper temperature hatch out a tiny worm or larvæ, in just about three days. It is quite probable that aside from temperature the bees have some agency in making these eggs hatch, for they, from the time the egg is laid seem incessantly busy "poking" their heads into the cells containing the eggs; be this as it may at any rate so soon as the larvæ breaks the shell, it is kept profusely supplied with a milky looking food probably produced in the stomach of the attendant or nurse bees. These larvæ at first just visible to the naked eye now grow with marvelous rapidity and at the end of about 6 days more, they almost entirely fill the cell, and are soon capped over forming what we call sealed brood. The young bee now receives no further care, but after about 11 days more—21 days from the egg—it gnaws itself out of its cell a perfect bee and ready to assist in *some* of the duties about the hive in perhaps 24 hours after.

This milky food administered to the larvæ has of late become an interesting matter, for unless the workers can supply it plentifully, the eggs laid by the Queen seem to be removed by the workers almost as fast as laid, at least they are gone and we find fresh ones in their places every day, but no unsealed larvæ is to be seen in the cells until the workers can go abroad and gather pollen from the flowers, providing they have no supply kept over winter in the comb. Some instances are mentioned 'tis true in which a limited amount of brood has been reared without pollen; but so many circumstances seem to indicate pollen as being an absolute necessity for brisk brood rearing that we may consider it established we think, and proceed at once to consider whether any substitute may be profitably furnished in the spring, before the blossoms yield a supply. It was some time ago decided by analysis that the composition of this pollen, or what is better known perhaps to some of our readers as "bee bread," was quite similar to that of the unbolted flour from our common grains, Oats and Rye particularly, and that bees will carry into their hives considerable quantities of this in the spring is well known, heavy colonies having been reported to have carried in 20 lbs. or more each, in a season. We are happy to say that this substitute seems to answer every purpose, and the heaviest crop of honey we ever had was after having fed them most liberally with the Rye and Oat meal in the spring. To get them to take it 'tis only necessary to place it in some sunny place, as much out of the wind as possible, in shallow frames or boxes. If they don't find it readily, get a few bees at work on some bits of comb honey, and then lay them in the meal. If it is before natural pollen has come they will soon abandon the honey, and commence a joyous hum over the meal; after the soft maples and alders yield pollen they will pay little or no attention to the substitute.

While fruit trees are in bloom, but little can be done to aid nature unless it be to put a frame of empty comb in the centre of the brood nest to give the Queen more room for eggs, this should only be done however when so much honey is brought in that she is really in need of more empty cells than the workers have provided for her. Much mischief has been done by beginners, in their zeal to have a colony rear brood faster, by spreading the brood nest so as to expose and chill the larvæ. After fruit blossoms, in most localities there is a dearth of honey yielding plants for two or three weeks, or until clover begins to yield.

As we cannot by any means afford to have our colonies stop rearing brood we would advise feeding through this period. No provision need now be made for pollen, as plenty of it abounds, and we need only consider liquid food. For this purpose sugar syrup is probably equally as good as honey; for the method of feeding, see Universal Feeder in Sept. No.

At this season we should feed only so much as will be used in brood-rearing and no more.

[For Gleanings.]

REPORT OF OUR APIARY FOR 1874.

BY G. M. DOOLITTLE.

WE had a very cold and backward spring. Snow was three inches deep the first of May and upon examining our hives the 4th of May (which was the first day we could do so) we found them with no brood and but few eggs. We gave them the best of care in our power and by the time apple blossoms opened we had them in quite a prosperous condition, although yet few in numbers. Apple blossoms furnished an abundant supply for brood-rearing, and some of our strongest stocks made a gain of from 12 to 16 lbs. We always have a season of scarcity between apple and white clover, and by the time white clover opened, which was about the 18th of June, our honey in the hives was nearly exhausted. As white clover was nearly all killed by freezing weather last spring, bees did not get any more than they consumed until sumach and whitewood opened, which was July 1st, and lasted but four days as it came on wet then and continued so until the 16th of July, at which time our hives would not average 2 lbs. of honey in the hive; a week of rainy weather at that time would have starved the whole, without the aid of the beekeeper. Basswood opened the 16th but bees could do nothing on it until the 19th on account of high wind and rain. Then came 7 days of fair weather, then three of rain and then two more of fair at which time basswood was gone, making 9 days of basswood. Teasel yielded very sparingly but from buckwheat we got 900 lbs. of surplus which was the most we ever obtained from that source.

Thirty seven out of our 50 stocks we worked exclusively for box honey and the remainder we devoted to improvement of stock and increase. We have at present 100 stocks in fair condition for winter and have sold 3674 lbs. box honey or a fraction of a pound less than 100 lbs. to each old stock worked for box honey. We sold our white honey, (2774 lbs.) at 28½ cts. per lb. here, and the dark at 20½. Extracted is worth but 12 cts. with us, but as we have none the price will not affect us any.

We should be pleased to hear a report from those large hives and prolific Queens down in Kentucky, kept by Mr. Adair.

How many of the readers of GLEANINGS have been troubled with their bees persisting in building drone comb? We never saw such a year. Some of our new swarms built ten full frames of drone comb before we could get eight worker built. We first commenced to cut it out but they would build it right back drone, so we adopted a new plan; we let them have it and kept shoving it out putting empty frames in the center and by the time they had 4 or 5 drone combs nearly built they would think it was time to build some worker. We think a great deal of nice white drone comb for boxes, and in order to get it so, we opened each new stock every four days and what combs had larvæ in we took out, and left the others in until next time round. When they would not build worker any longer we filled out the hive with worker combs from our nuclei. Mrs. Tupper and others tell us to make our new swarms by taking full frames out of several old stocks and putting empty frames in their places thereby making a full stock at once. We have found ourselves often wondering at such advice as we never have been able to get one square inch of worker comb built under such circumstances.

Borodino, N. Y. Oct. 12th, 1874.

In reading the first half of the above we had almost concluded our friend was going to be a candidate for "Blasted Hopes," but "shades of Huber!" we certainly know nothing of bee-keeping if it be possible to get 2774 lbs. of box honey from 37 stocks in but little more than *nine days* yield of honey. Again the 13 remaining were increased to 50; this is not so very difficult if the season were fair, but friend D., you certainly had a good yield from some source for more than the time specified, or else you possess some secret method of getting honey not yet given us through the Journals. We'll have to pay you York State fellows a visit and learn something if we are so far behind. Seventy five lbs. each during the basswood yield would be over 8 lbs. per day, for 9 days, *box honey*. Saving all the nice white drone comb for box honey is certainly a very important item.

OUR OWN APIARY.

WE have to-day, Oct 9th, commenced going through the hives for the last time, inspecting bees and stores, cutting winter passages through such combs as have none, etc. We find that our quilts are always kept above the frames far enough to allow a bee to pass, by little projections of propolis, comb etc., so we shall not think it necessary to lay a stick across under the quilt. We find some sealed brood in the hives but no eggs. They are bringing some pollen now; this will probably be kept until spring.

We are enjoying ourself hugely just now in making a *Glass House*, (we'll have to stop "throwing stones" will we not?) it is simply a wooden structure 8x13, set in the ground 2½ feet, and the dirt thus removed is thrown on the north roof (which is of boards) and banked up at the east and west ends. The south roof and south side are to be all of glass. We propose to make this an experimental "hospital" for bees that get uneasy in winter, or for very weak ones in spring.

Oct. 15th—We have had two severe frosts, and as usual we find a few dead bees bro't out of most of the hives afterward. We presume these bees have been caught away from the cluster, and in drawing together as the cold increases they found themselves separated by an entire comb, and being too much chilled to go around or over the top, they are frozen. In front of one entrance to our Standard hive we found the *Queen* dead among a small handful thus brought out.

Alas, our 70 colonies, are *already*, only 69.

Oct. 16th—Another frost, and another Queen found in front of the hive. Our subterranean Green House is nearly finished. Although the day has been only tolerably warm, the thermometer showed the temperature of the air inside to be 115 degrees, about two o'clock, and we have not had the glass washed yet either. We have been of the opinion that bees would thrive even during our hottest summer months providing honey was yielding plentifully but whether they will rejoice at the temperature mentioned is more than we can say just now, but we assuredly will test the matter.

Oct. 19th—To-day being warm and pleasant we have looked up the cause of the loss of the two Queens. Our Standard hive contained two colonies; it came about in this way: P. G. some time in June petitioned her choice of a nice lot of Queen cells just built, and combs of brood sufficient to start a colony in the "Standard." Much was the bantering and joking in regard to her ability to choose a cell that would produce the finest Queen, and when it really resulted in a *crooked* one, while all the rest were fine and shapely, of course the crooked Queen was a standing jest. She became fertile and in due time laid eggs, but she made so slow progress that a division board was inserted, an auger hole made in the back end and a *new* Queen reared. This last proved very prolific and so rapidly did she fill the combs that her colony in a short time eclipsed

[*Continued on page* 125.]

BEES AND THINGS "AWAY OVER THE WATER."

FROM ONE OF OUR NUMBER IN AUSTRALIA.

DEAR NOVICE:—I rec'd four Nos. GLEANINGS, two packages Queen Registers, and King's Text book, all in good shape. I must certainly commend you for the manner in which you send your goods out.

I see you are about to have a Standard frame and hive also. I think it about time; now, the "horizontal" as you call it, has been in use at my Apiary just three years. I have only worked six of them as yet, but I am about to have my Apiary composed of hives holding 40 frames each, the frames are 18x10, which I intend to keep to. I have hives at the present time working frames of the following sizes: 23x8½, 12⅝x13½, 18x10, 16x10, and 13½x8. The different frames have been brought into use just by way of trial,

And of all the frames I ever did see,
Eighteen by ten is the frame for me.

Adair is right in saying that a large hive will prevent swarming if properly managed.

Your Queen Register is a first-class affair, but for this fair land of ours, we should require every month in the year. I thought I should have had some use for the cards by the time they arrived, but alas! I am doomed to disappointment. I told you about Quinby sending me two colonies of bees, in my first letter, the bees were not ordered in my name, but Novice I must not forget to tell you that it was my money that paid for them. And what do you think the charges were? just 13£. 5s. 7d. (about $70.00). Now the only thing that I blame myself for is this, I ought to have written to Mr. Quinby stating full particulars. We have now a Royal mail from San Francisco which makes the run in about 30 days, they wont refuse to take bees now. If Mr. Q. or any other bee-keeper in America will try their hand at sending a colony of Italians, and the Queen is only alive when I receive them, I promise to forward by the return mail $25.00, and if it proves a failure I will pay the *usual* charge. I refer them to my Banker in Queensland, any member of the Legislature, any Newspaper Editor, or to the Governor himself. Money is no object providing we can get the bees safe, and for my part I see no difficulty whatever in sending them. I have tried from Neighbor & Sons, London; some bees arrived but the Queen was lost shortly after leaving England. I wrote them about it and they expressed their sorrow at the failure and said that if I could devise a better plan they would send out another colony.

It is mid-winter with us, and our bees are gathering honey and pollen at a good pace. We have something blooming all the year round in this fair and happy land. I wish poor old Mr. Langstroth were here, I am sure he would live much longer.

I have sent the Blue Eyed baby a photograph of one of our Natives. J. CARROLL, Mohawk Valley, Ennoggera, Queensland, Australia. Via San Fr'isco.

Who will send friend Carroll the bees and thus successfully introduce the first Italians in Australia? Quinby, and Neighbor & Sons, have failed but with better facilities now, we think it can be done. Observe he offers to bear all expenses, and run all risk, whether the bees arrive alive or not. Those who are willing to try had better drop a letter to him. The letter must be prepaid 10c. Perhaps Dean can send him a Queen *by mail*. He has never failed yet to our knowledge. The Photo. mentioned will make a rare addition to our "Medley."

◆

HONEY RESOURCES, BEE-KEEPERS ETC., OF THE SHENANDOAH VALLEY.

BY M. H. TWEED.

FRIEND NOVICE:—The following week after returning from your place, I started for Virginia, was away six days and had a very successful and pleasant trip. I called at the little towns between Harper's Ferry and Winchester, and from there I drove up the beautiful valley of the Shenandoah, was on the road with my horse for four days. I found a great deal of honey in the valley and at reasonable prices. I bought some in large caps—beautiful honey at what they call a shilling per lb., a Virginia shilling is 16⅔ cts., and we are getting considerable at 20 cts. there. I do not think there is so favorable a place for bee-keeping east of California as the Shenandoah valley. The principle reason is that the Blue Thistle abounds in the whole valley. Then the climate is most favorable. The Blue Thistle makes rich white honey, is in bloom fully four months of the year, each plant has from 25 to 50 blossoms on it. One great advantage it has over white clover is that in pastures the cattle cut down the white clover while the thistle is never molested. A blue field looks handsome though it is a great pest to the farmer. I cut a sample and brought it home as a curiosity and if you have never seen one and care to look at the great honey producing plant of that valley, drop me a postal card and I shall gladly send it to you. There is great room for such a man as Novice down there. With the exception of about a half dozen, the bee-keepers of that valley know very little about bee culture. I saw two extractors and they had not been used to any extent. One owned by Henry Slagle who understands bee-keeping very well, takes two or three Bee Journals and makes money out of his bees; he has 100 hives and has this year 4000 lbs. comb honey, he lives in Winchester. The other extractor is also owned by a Winchester man—Oliver Brown, a very fine old gentleman. He knows all about Novice and had many questions to ask about you. With the exception of your Apiary, his is the finest I have ever seen—50 colonies in Langstroth hives. Slagle's are also in the Langstroth hive. In wintering, they in the whole valley scarcely ever lose any; in nearly all cases they winter outside. I found very few Italians, only such men as Brown and Slagle know anything about them. The principal hive is the old box hive, where they have anything else it is the Langstroth, and in a few cases the American. The majority of them call any kind of a hive a "bee gum" and many of them call a colony "a bee." I found an old watch repairer in Front Royal who had 60 hives, had been keeping bees for 25 or 30 years, and had never seen a Bee Journal or heard of an extractor. Had heard of bee veils but had never seen one. He took me out to look at his hives and when within 20 yards of them, he said we had better not go any nearer as the bees were very cross. I did not wonder at that man not getting much surplus honey. I left him two copies of GLEANINGS and bought what honey he had, some 500 lbs. I found one of your subscribers, Steed & Son, near Front Royal. They have quite a large Apiary and seem to be learning something in the way of bee management. I was looking at one of their hives which resembled a coffin very much in shape and the old man told me that Jamie put a "bee" in that in the spring, and now he had it nearly full. There seems to be no question but that they can with any reasonable care get a fine quantity of surplus honey in comb, any season. I was well pleased with my visit and came away satisfied that the valley of the Shenandoah is the spot for successful bee-keeping, and that we can always rely on getting a large quantity of white clover honey for our purpose and at reasonable rates. I was astonished at the bitter feeling they still hold towards the North, it was very interesting to me to talk with a bee-keeper who had formerly held his slaves.

I have made inquiries about mustard seed and cannot learn that any of the genuine seed is raised east of California (it is raised profitably there in large quantities), the seed used in this city is all imported from England. There is a kind of mustard raised in the Eastern States but it is not of much account. If you wish to try it I can get you some genuine English seed at any time at 12½ cts. per lb.

There is a party in California who has offered best strained honey (as clear as water) by the car load to cost about 12½ to 13 cts. delivered here, we have sent for four barrels as a sample.

Have you ever heard of "Virginia wild honey?" I had often heard of it, but never understood the matter thoroughly until my recent visit to that state. I had heard it spoken of as having an unpleasant taste, and those who knew nothing about bees attributed its peculiarity to the fact of its being gathered by what are called *wild bees*.

On each side of the valley extends a great range of mountains, the North mountains on one side and the Blue Ridge on the other, on these mountains a plant or small bush grows called Laurel, it is poisonous in itself but on it there is a pretty flower which yields honey largely; rank and bitter it is, and I was told that a liberal dose will always be followed by sickness. I know the taste for I got some for breakfast at Shansburg. Now as no bees are kept that are confined entirely to the mountains, there is no Laurel honey of any account excepting such as is got from bee trees, and it is natural enough to suppose that the difference is caused by the bees that gather the honey.

Pittsburgh, Pa. Sept. 26th, 1874.

[*Continued from page* 123.]

the other although made fully six weeks later, and nothing prevented the execution of our original intention, viz., killing the "crooked Queen," except that she proved *pure*, and the other *hybrid*. After some discussion they were both to be allowed to winter and further steps decided upon in the spring. The Queen found at the entrance *was not crooked* and the examination to-day showed that our division board although nicely fitted at the time, had shrunk so much that the bees were passing under one corner and so we had one large colony instead of two with a crooked Queen as their only hope. We have before thought we wanted no more divided hives, yet division boards can be made perfectly safe we suppose, although they have cost us some fine Queens before. The other hive proved to have a young Queen inside so that we have lost only one after all.

The Green House is finished and two colo- have been in it for two days. 'Tis true they will take syrup from the opposite end of the room and carry it to their hives, and *a part* of them seem contented and industrious, but by far too large a part will persist in flying against the glass bumping about until they fall tired and exhausted to the ground. They will not as yet touch the meal but have their hives pretty well filled with syrup and have commenced sealing it up. The very high temperature in the middle of the day seems to make them very little inconvenience. We imagine 'tis the young bees that do the work and that the old ones accustomed to the fields are the ones that blunder about on the windows. The walls absorb so much heat during the day which they give out at night, that the air is kept all night at a very comfortable temperature.

Oct. 20th—Three more colonies have been placed in the green house and we are sorry to say they don't do just as we would have them. They will cluster on the windows and buzz about until a good many fall down on the ground. Toward night the greater part of them get into *hives* and if the glass was only a foot or two above the hives very likely the humming as they find their hives would call all the late bees into *some* hive, but as for finding their own, when so many are crowded together, it looks quite doubtful. The bees in the first two hives 'tis true, seem to be quite at home, and flit about gathering stores etc., and seemingly never touch the glass. Had they all been put in after having been confined some days by cold weather, that might have made a difference, as it is, we have had a fine spell of weather for some days. We have made one discovery which is new to us at least. The syrup we have been feeding is quite thin. Well the two first mentioned have filled their combs so well, that even the eggs one of the hives contained are now crowded out. This morning *laden* bees were going out so rapidly from one of them, we thought it might be they were being robbed. After a little practice we were enabled to follow them easily on the wing, and made out unmistakably that they, after dancing a while in the sunshine, discharged from their bodies what seems to be only pure water, and after this manouver they returned immediately to their hive with bodies so much reduced in size that they made quite a contrast to their comrades who were just going out. Many bees are hopping about on the ground with distended bodies seemingly unable to take wing, and soon die. Does this not partially explain dysentery and show why it is so essential that diseased bees be allowed to fly occasionally? May it not be also that this is a part of the natural process of freeing the raw honey of its superfluous water?

Many of the bees on the glass, we notice are those with the distended bodies, and perhaps the instinct that impels them to get a greater distance from the hive is the cause of their death.

Oct. 21st—We put a curtain of cotton cloth over the glass to-day and thus kept an even temperature of about 80°; this does considerably better.

Three o'clock P. M.—The Queen has actually laid *one egg* in our pet Italian Nucleus in the green house.

Oct. 22nd—That egg is gone.

Oct. 23rd—Friend Dean has been here. He very much doubts our being able to get brood reared out of season by any artificial means, and fears that confining bees by glass will not work at all. Many bees are now dead under the glass and our weak nuclei is daily getting smaller although they seem to labor with an industry perfectly natural.

We really begin to think our experiment a failure. We would build a larger enclosure without hesitation if we thought 'twould answer any better. Dean thinks the farther the glass from the hive, the greater would be the loss. As a *part* of the bees seem to be perfectly at home and carry syrup from any part of the room without difficulty we cannot as yet agree with him. We now give them full sunshine in the morning until the temperature reaches about 80°, and then put down the curtain the rest of the day, and the mortality seems less.

Oct. 24th—Gathered up all the dead bees this morning that we may be enabled to see how many now die daily. We found perhaps a quart.

Ten o'clock—"Oh you little yellow busy bodies! Outwitted your 'Poppy,' didn't you." We went to let down the curtain and our weak nuclei seemed so very industrious that we took a further look. The Queen and most of the bees had gone over to one side of the hive where we had not looked and actually had a cluster of eggs nearly as large as ones hand. Perhaps her Majesty objected to our counting every egg as fast as it was laid. The glass house *may* be a success yet. We gave them yesterday some basswood honey for a change.

Oct. 26th—An interesting point comes in here; these bees have no pollen in their combs that we can discover. To-day is the third day since the eggs were laid, but none have hatched into larvæ. If our former deductions have been correct they must work on the meal or there can be no larvæ.

After dinner—How many of our readers can realize the joy we felt at finding just one little bee at work on the meal when we went home to dinner? Of course it went strait to the nucleus when laden. After dinner two more were at work and although they each averaged a load, say, every ten minutes, scarcely a trace of it could be found in the cells at 2 o'clock. Are we not right in thinking it was quickly taken into the stomachs of the nursing bees to be changed into food for larvæ and that we shall find larvæ also, to-morrow or day after?

Oct. 27th—Sure enough we have larvæ well supplied with its milky food, and are so far along in the work of rearing bees entirely in an artificial temperature.

Oct. 28th—Just before going to press—Four of the five hives have eggs and brood and every thing seems thrifty except the number of bees (perhaps 200 daily) that fly against the glass and fall on the ground with distended bodies, and die. We should very much like to know how many dead bees were found in Mr. Bidwell's hot beds in the spring. In our next we hope to be able to tell you of perfect young bees reared entirely on artificial supplies.

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,

EDITORS AND PROPRIETORS

MEDINA, OHIO.

Terms: 75c. Per Annum.
[*Including Postage.*]
For Club Rates see Last Page.

MEDINA, NOV. 1, 1874.

We have unfortunately mislaid Seth Hoagland's circular in regard to the N. A. B. Convention at Pittsburgh, on the 11th 12th and 13th, but think that to secure the benefit of the half fare rates granted on most of the R. R's, it is necessary to write first to Mr. H. at Mercer, Pa.

* * *

We have just rec'd the semi-monthly German *Bienen Zeitung* for the year 1874. *At present* it is of just about as much value to us as a work on astronomy to Blue Eyes—we have a "big time" looking at the pictures. If the Germans use hives and implements as well made as the plates that represent them, perhaps their American cousins can with profit learn more than *one* lesson from them.

* * *

KIND reader, if you are in any way interested in

Bees or Honey,

we will with pleasure send you a sample copy of our Monthly "GLEANINGS IN BEE CULTURE." Simply write your address plainly on a postal card and address A. I. ROOT & CO., Medina, Ohio.

[*Any Periodical giving this one insertion and sending us marked copy will receive Gleanings one year.*]

As we are paying considerable money for the insertion of above advertisement in various papers, of course we shall consider it a favor to have you give us the names of bee-keepers who you think might wish to take it. Don't send any stamps; simply put their address plainly on a postal card.

* * *

While we are much obliged to the Ed. of *B. K. M.* for his pleasant mention of our Lithograph, we can hardly forgive him for not looking at it closely enough to discover that it really is a Hexagonal Apiary, having the whole number of hives arranged so that each one is the center of six others, at equal distances from it and from each other. Had he been in the habit of extracting honey each season, carrying the combs into the extracting house and then back to the hives, he certainly could not have failed to note that *the nearer* the hives were located to this room, the less would be the labor; and hence would not have made the remark that he could "see no reason why an Apiary exactly square, is not quite as good and convenient as one hexagonal in shape," and that "bees build their combs hexagonal for very good reasons"—"which, however, would be very poor arguments for having an Apiary in that shape."

If we grant that 6 feet, or any other distance for that matter, is as close as hives should be placed, can we not get them much nearer on the plan mentioned, than if placed in the form of a square? Is not economy of steps as important to us, as is economy of wax and labor to the bees?

* * *

"FLYING BEES UNDER GLASS."

FRIEND NOVICE:—I see in Oct. GLEANINGS that you allude to Mr. Bidwell's experiments in wintering bees; also make some criticisms in reference thereto. Will you please allow me space in Nov. GLEANINGS, for an explanation.

At the spring session of the Michigan Bee-Keeper's Association, held at Kalamazoo, in May last, I was, in absence of our Secretary Mr. Frank Benton, elected Sec. *pro tem*, and took charge of all papers presented at that meeting. In making out the report of the proceedings for *B. K. M.* (which was condensed as much as possible consistent with perspicuity of statement), we purposely refrained from making any extended remarks in reference to Mr. Bidwell's paper, inasmuch as the paper itself, was to be published. Being requested by their several authors to return the original manuscript to them, we copied the different papers and forwarded the same to Mr. King from time to time for publication. Owing to ill health, which almost entirely precluded mental labor on our part during the summer, we deferred sending a copy of Mr. Bidwell's paper until about the tenth of August, for the Sept. No., supposing it *seasonable* at that time; not even dreaming that any one wished to try the "experiment" of placing bees under glass, *with the mercury indicating* 100° *in the shade.*

Now about suppressing Mr. Bidwell's P. O. address. Mr. Bidwell is extensively engaged in horticultural as well as apistical pursuits, and being corresponding Sec. of the South Haven Pomological Society, has very little time (and possibly—inclination) for answering inquiries relative to bee culture. He has repeatedly stated that he intended to write nothing more about bees, having had "his say" on that subject. We therefore did not feel at liberty to give his address, and so withheld it. But in view of what has been said, we'll simply say that he resides only a short distance from the writer, and receives his mail at—South Haven, Michigan.

We are well acquainted with Mr. B. and know him to be perfectly reliable and trustworthy. Moreover we are conversant with his experiments, and feel confident that the value of this method has not been overrated. For the benefit of GLEANING'S readers, we submit the following in reference thereto.

The "hot-beds" alluded to in Mr. B's paper, were excavations in dry sandy soil (about two feet in depth) sloping gently to the south. Boxes made of 1½ inch plank, and some 15 inches in width, were set over these and banked up with earth. Each "bed" was covered by four sash, 3x6 feet, and straw was scattered over the bottom of the pit to keep the bees from alighting on the earth. The sun was the sole source of heat.

The bees were all put into a house cellar in Nov., but becoming uneasy in Jan., were carried out and placed in these "hot-beds" for a fly. Many of them were left there until a "cold snap" in March, when they were returned to the cellar, as the "beds" were not made sufficiently tight to exclude a great degree of cold. Mr. B. flew 16 stocks at once in a single bed, as set forth in his paper, and encountered no difficulty in having all bees return to their respective hives. And finally, his bees that flew under glass, *all* came through to May in good condition, and have stored a large amount of surplus honey the present season.

HERBERT A. BURCH, South Haven, Mich.

FRIEND NOVICE:—Yours of 3rd, at hand. I had a temperature as high as 85° to 90° when the bees flew. I think the bees *all* returned to their proper hives that returned at all. I had only one tier of hives.

Oh! yes, you could have seen them go out and fly around and never touch the glass at all, void, and go right back. I believe Mr. Bidwell tells the exact truth about it. I thought I could "glean" a knowledge of the fact that, that plan could be made a success, from what I saw during my experiment. I think it will become practical *only* when a voiding room is "kinder" attached to the wintering house. A glass *over* the hives is incomparably better than one in *front*, as a window for instance.

JAMES HEDDON, Dowagiac, Mich. Oct. 6th, 1874.

We think enough has been done to make it pretty certain that dysentery can be arrested, if not entirely cured by this means. Mr. Burch has given all needful directions for making the pits unless it be that they must be most thoroughly drained; if not naturally then artificially. The sash 3x6 feet can be purchased in Cleveland of B. H. Stair & Co. for $1.25 each in quantities, perhaps a little more singly. The glass can be purchased of B. L. Fahenstock, who advertises in this No., for $3.50 per box of 90 lights, net; a little less for large quantities. This is second quality glass but we presume it is just as good for this purpose. Each sash will require 28 lights and the expense of material will therefore be not far from $2.50 per sash, or $10.00 for a 6x12 bed such as were used by Mr. Bidwell. Will Mr. Burch please accept thanks for the information given.

REPORT FROM ADAM GRIMM.

EDITOR GLEANINGS:—Yesterday I shipped the second car load of honey from my this year's crop with some few small lots from other bee-raisers. This cleans me all out and since I get a little more time now, I comply with your request to report my this year's bee business.

I had after the spring's sale, and a loss of 48 during winter and spring, 700 colonies left.

From them I got of box honey	lbs. - -	14887
And of extracted, net weight	"	10332
In all	"	25219
Add to this amount in unfinished boxes	"	600
Previously sold and given away	"	100
Making a sum total of	"	25919

Or an average of about 21 lbs. box honey, and 16 extracted. The extracted honey however was all from 70 hives making it about 147½ lbs. as an average from each of these.

It will be natural for your readers to inquire, to whom I sold all my honey, and what price I got. Well. I contracted the whole amount to Mrs. S. E. Spaids, New York, who bought all my honey last year and paid me for it, as agreed. The price I am promised is 25c per lb. net weight, for white and yellow honey in the comb, 15c for buckwheat honey, and 12c for extracted. This is a low price, but I am satisfied, since I got rid of that large lot of honey at once.

My bees, which increased to 1158 colonies, are in very good condition to go into winter quarters and if they should go through the winter and spring in good condition I will have 300 or 400 to spare or can stock some more apiaries. Bees are considered very good and safe property here and sold at full prices if offered for sale. I have gone into banking, but cannot think of neglecting my bees. I have not been at the bank more than one week's time in five months. Bee business is so much more profitable that I cannot get a notion yet to leave it.

ADAM GRIMM, Jefferson, Wis. Oct. 21st, 1874.

Shall we not have to acknowledge friend Grimm with his 1158 colonies, the largest bee-keeper in the world? and judging from his yearly reports, is he not also as a rule the most successful?

HONEY COLUMN.

MR. A. I. ROOT:—What is your best figures for Honey in, say from 2 to 5000 lb. lots? Give us your closest price for cash.

BARBER & STOUT, No's 32 & 34 Main St. Cincinnati, O.

We are happy to say that Messrs. Barber & Stout are both prompt and reliable.

MR. ROOT, Dear Sir:—Through the assistance of your and other Bee Journals, and my old acquaintances, I have already procured 73000 lbs. of honey and hope to be able to handle 50000 lbs. more this season.

S. E. SPAIDS, N. Y. City.

As an item of interest, I will say that I have just rec'd from a St. Louis Dealer the generous offer of 12½c for Pure Linden Honey, ext'd, for which I have a home market at 25c, and a demand for more than I can furnish, from my hives.

E. M. HAYHURST, St. Clair, Mo.

Could I buy Honey Jars cheaper of the manufacturers than of dealers here? If I can could you send me the address of a manufacturer?

I have 4 barrels of Linn honey, I would like to get 15c for it.

ROBERT BIELEY, Colfax, Iowa.

You can buy cheaper of the manufacturers usually, but you will have to take a whole case. B. L. Fahenstock whose advertisement appears this month is a manufacturer. Send to him for a circular.

To your readers please say that I do not buy honey at all, but if they will send me a sample (say 2 or 3 ounce vial) I will sell it for them where they will get their money on the delivery of their honey here. There is no demand here at present, or at least very little and I now advise holding for a short time. My object has been to keep up the price of ext'd honey. Good nice comb in good shape will bring 30c very readily here now.

W. G. SMITH, 419 Main St. St. Louis.

DEAR NOVICE:—I have about 1500 lbs. white clover ext'd honey, put up in 14 gallon casks, well waxed, a choice article of honey. What shall I do with it? I can get 16c in Milwaukee, but freight and commission out (3c) leaves me only 13c, a poor price. I will get about 500 lbs. golden rod and buckwheat enough to stock the local market here, with what is raised by others. Box honey sells readily at 25c, and I would like to realize 17 or 18c clear, or I am afraid I will get crowed over. Some of my neighbors already prophesy sour honey and no sale. The honey weighs 12 lbs. per gal., so there's no danger of souring. I will tell you how I got it some time.

R. L. JOINER, Wyoming, Wis.

At present the market price for light honey seems to be only about 15 or 16c. As this price is for delivery in the principal cities it is generally best to sell near home. The figures you mention for comb honey are probably retail. Does not extracted honey sell at retail for nearly as much? In '71 we sold our whole crop for 12c, in '72, 13c, and last season we sold 4 barrels for 15, 16, 18 and 20c respectively, and could have sold all for 20 had we kept it until Feb., as we did the last barrel. Although we are not justified in thinking it will bring any more in Feb. than it does now, yet we should be in no hurry about selling at less than 16 unless we needed the money badly. If the bees "jest wouldn't die" we should be quite content to raise honey for 12 or 13c.

Humbugs and Swindles

Pertaining to Bee Culture.

[We respectfully solicit the aid of our friends in conducting this department, and would consider it a favor to have them send us all circulars that have a deceptive appearance. The greatest care will be at all times maintained to prevent injustice being done any one.]

ALTHOUGH we might prefer to dispense, for all time to come with this department, we fear public safety as well as our own, demands that we should mention the names of a few who are hindering the cause of bee-culture.

Before so doing, and while thanking our friends for the aid they have given us, we would remark that the mere fact of differences in opinion in regard to a business transaction is by no means sufficient ground for publicly showing up either of the parties. Still, we are always glad to have such transactions submitted to us, as it gives us an opportunity of judging better of the business habits of those advertising largely. Where an advertiser receives money and then refuses to respond in any shape or manner, and also refuses to grant us any explanation, we have very good grounds for suspecting fraud.

In our April No. we gave a letter from Mr. J. P. Parker, but omitted the name of the firm to whom he sent the $30.00. This firm was Gray & Winder of Cincinnati. We have been waiting since April to give them a chance, but as their letters, or rather Mr. Winder's letters only propose to pay it sometime, if friend P. will be "quiet and gentlemanly about it," we presume it is $30.00 lost. Mr. Winder in a letter to us recently, said if the transaction were published he would *never pay it at all*, and as he probably would not any how, what is to be gained by keeping quiet? True, he might go on and get other peoples' hard earned $30.00, and then tell them the same, but this is the part we most decidedly object to. The letters we receive from these delinquents have got to be an old story, and we have become so hardened that we don't mind it a bit when told we are "meddling," and that our assistance and advice has not been asked etc., etc. We are sometimes gravely informed that great numbers of similar complaints are made of *us* but that they, out of a kind regard let it drop, etc. Now this is a mistaken kindness certainly, for if any one has been guilty of such a piece of folly as making complaints *of* us, instead of *to* us, the only way we know of is to tell us about it. Put it in print certainly if thought advisable. We haven't the least objection to having any part of our business fully ventilated at anytime.

D. L. Adair has been complained of for a long time. The *B. K. M.* thinks proper to give one of the complaints, omitting name 'tis true, but his contradictory mention in his advertisements of the long looked for Dec. No. is so familiar to most readers of the Journals, that few will fail to know who is meant. If the complaints were only for money sent for Annals, we might think that he would *sometime* send it, but when he advertises to receive money for GLEANINGS and *keeps that too*, without giving us the slightest notice, we have no choice really but to speak out.

Before crediting appearances, we have written him repeatedly, and even appealed to him in print to come forward and assure us that he meant sometime to settle all things honorably, but to all, he preserves a grand indifference, and were it not that drafts, registered letters, etc., are readily taken care of when addressed to him we might think yet with *B. K. M.* that there is some mistake. Titles and education are a fine thing, but their possessor is no more excusable for appropiating other peoples money, than any one else.

"BEE STINGS CURED, WITHOUT COST. NO MORE PAIN OR SWELLING. THIS IS A NEW DISCOVERY," has been for some time past advertised by the "Busy Bee" man, but it did cost us 10c. We know we "got bit" $2.00 worth on the Ambrosial Honey, sometime ago, but we thought perhaps he had become a better man now. "Nary better." The "Ambrosial" is advertised with the same old, oily string of falsehoods (see page 85, Vol. 1) and the "Great Discovery" is as follows:

THE BUSY BEE SUPPLEMENT.

BEE STINGS—Are dreaded by nearly every one, on account of the pain and swelling which follow, from the poison injected.

HOW CURED—In severe cases, the person should drink freely of whiskey or some strong alcoholic drink, till he feels its effects; this will prevent all danger and further swelling.

A NEW DISCOVERY—Immediately after receiving a sting, take some leaves of peppermint, or catmint, (or their allies,) crush them with the teeth and add some saliva; then rub the wounded part briskly for about five minutes; this will remove the pain and prevent inflammation, as by this process the poison is all removed.

The above is the whole contents of this great Supplement to be *given* away, (for *ten cents*) except a few advertisements; among them is one of "Cheap and Artistic Printing." All we have to say is that if the *supplement* is a sample, we would respectfully prefer "t'other kind."

We are amazed that this H. Herman Flick should find people enough in this age of Journals, to support him with his Ambrosial and Bee sting cure. We certainly shall "stand by him."

About the Cure. Will all those who persist in believing in the efficacy of these cures, (we mean to include the German Bee Sting Cure and all the stuff "put in bottles" for that purpose) please test them by the method proposed by Quinby, viz., try one sting with the "medicine" and one with nothing? Don't make up your mind from a single experiment, but try half a dozen times, first with, and then without, and our word for it, (unless you have some bottles to *sell*) you will conclude if there is *any* difference, the sting you rub and "fuss" with most, will be the worst. When you can learn 'tis best to pay no attention to stings, but to go on with your work, you will have little trouble.

We agree with *A. B. J.* in saying that not one letter in tenthousand is lost by mail if properly directed, if we except perhaps some of the Southern states where postal facilities have not as yet reached the perfection they have here. Now for a person to claim that letters must have been lost in the mails, as an excuse, and also to make this plea to a dozen different correspondents at about the same time, is sheer nonsense. We have yet to hear of a postal card being lost in the mails.

P. S.—About that *Whiskey* antidote. Since the "Crusaders" closed the saloons of Medina, we fear there would be a serious rush to the bee hives for the sole purpose of *being stung* were such treatment reccommended here.

We to-day, Oct. 22nd, get a new circular from Mitchell in his usual "Spread Eagle" style, offering (rights!) the *best hive extant* at a cost not exceeding 25 to 50c, and other things in proportion. It appears that he is located this time near by—Defiance, O—but the circular comes all the way from P. M. Peterbaugh, San Gabriel, Cal. Can he *find* more victims?

Heads of Grain,

FROM DIFFERENT FIELDS.

The BOOKS *teach us that* ALL *bees cut* THEMSELVES *out of their cells.*

DEAR NOVICE *Et al*:—In the fall three years back, my first year with bees, the following came under my observation: The 16th Sept. '71, I had one Italian stock, on opening this hive I found several Queen cells. There were two on one comb, one near each side bar. This comb with the two Queen cells on it, I put into another hive, added to it two or three combs of capped brood and honey and put in over a quart of bees from parent hive (parent hive very full of bees). Both the Queen cells were capped when transferred to the empty hive. Seven days after, on opening the hive, without smoke, found several bees cutting away on one of the Queen cells. On dispersing the bees I found a hole cut into the cell about ¼ of an inch *above* the small end. I distinctly saw the white immature Queen in the cell, and with a sharp knife I *carefully* enlarged the opening, so as not to wound the inmate. I immediately replaced the comb and closed the hive. Two hours after I reopened the hive, found the Queen on bottom-board, the bees were trying to put her out, indeed did put her out of the hive. I now examined the remaining Queen cell, this was *intact*, there had been no intermeddling with it by the bees. This was Saturday, next day being the Sabbath I did not open the hive. Monday about 6 o'clock A. M. on opening the hive, the Queen was out on the comb, a very pretty well matured Queen. Now the last cell was cut on the *side*, (as *I saw* the bees cutting the first cell) and there was surely nothing like the smallest hole in the lower end. I examined with all possible care and had others to examine. I am satisfied that *both* Queens were cut out by the workers. Why did they do it? what was their object? J. H. WILSON SEN'R.

Lexington, Texas. Sept. 26th, 1874.

The occurrence mentioned is not infrequent. Although we cannot positively say *why* they do thus, we would suggest that it is the work of mischievious young bees who finding no unsealed brood to care for, have "nothing else to do." Had they been furnished with eggs occasionally, they would doubtless have been busy otherwise, and so felt no inclination to meddle with the Queen cells. At a certain age, they seem to be as full of mischief as "young puppies," and if they can't build comb, nurse larvæ, or build Queen cells, they will amuse themselves by "tearing down something"; if the Queen thus rudely exposed is old enough to live, all is well, otherwise they pick the white soft chrysalis out of the cell, piecemeal, with a most provoking unconcern and disregard of consequences. Young bees, like children *must* have *something* to do; if it cannot be useful it should at least be harmless or they will assuredly be in mischief of some kind.

I am making bee-keeping a specialty, commenced five years ago with two box hives and Black bees. Now I have 80 colonies of as fine Italians as can be found anywhere, have had many difficulties and troubles and have tried several different kinds of hives but have something now that I think I can tie to. Rec'd a choice Imported Queen from Ch. Dadant & Son, this year. My stock is all raised from Imported stock and if nothing happens will be in the Queen trade in a small way another year. Have taken about 4000 lbs. of honey during the season, 3000 lbs. since the 25th of Aug. I had some gather over 150 lbs. between the 26th of Aug. and the 15th of Sept. One of the best honey plants in my locality is Wild Cucumber; the islands along the Mississippi river are covered with it. My bees worked well on Alsike and Red clover, but when the Cucumber commenced blooming they worked on it. Another good plant for honey is a variety of Spanish Needle that grows in abundance in corn fields especially in places too wet for corn. My bees cross the Mississippi river and gather a great deal of honey from it in Aug. and Sept. The honey is a beautiful golden color. I will send you a sample the first time I am at a town where there is an express office. My bees have always wintered on their natural stores, have never lost a colony except from starvation. The late honey is so thick I could not throw it out if I wanted to. I wintered them in cellar of my house. I have made many observations on bees and honey plants but am a poor hand to write them.

A lover of bees. A. L. WILLIAMS.

Deer Plain, Ill. Sept. 28th, 1874.

Shall be very glad of your assistance in the Queen trade friend W. We hope no one will be deterred from writing us because they think themselves poor hands at telling what they have observed. We are all "at home" in this department.

Now I am only a beginner in the business, having only four colonies, three Greys and one Italian. In passing them for the last week or two I have noticed a pecular sour smell among them. As as they were working finely, I attributed the smell to the bloom they were working on; but the scent increased, and yesterday I found that it was the Italian colony, so I opened the hive and found it wet inside, from sweat I suppose, drops of water were on the lid and running down the side. The comb seemed to be damp and had a sour smell. On opening all the hives this morning I found two others in the same fix, except not so sour. I want to know the best plan to pursue in this case. I am using the Buckeye hive and it has no ventilators. I have attributed the cause of the sweat to that. Am I right? I intend ventilating them by boring a hole near the top and covering it with wire cloth. **T. B. PARKER**, Goldsboro, N. C. Oct. 6th, 1874.

We think the trouble is that they are getting *very thin* honey or syrup from some source, so thin in fact that it sours before they can ripen it. More ventilation will probably help the matter, but to make sure, we would remove the cover entirely and let the sun shine directly on the bees and combs; this will dry them out and assist them in getting everything sweet and clean. We have had a similar trouble in feeding weak colonies a large amount of very thin syrup.

Find out where they get these stores if you can, and report. The superior industry of the Italians sufficiently accounts for their being the worst affected. Nothing can equal the benefit of direct sunshine, for restoring either plants or animals to vigor and health.

And now a word on the "Iron weed" experiment. I moved two colonies on the morning of the 5th of Aug., after extracting all the honey, to the prairie referred to four miles off. By 9 o'clock A. M. they were as busy as though they had not been disturbed, and by the 15th they had every thing filled. Having a fine Queen I wanted to take care of, I took a couple of frames of young bees, brood etc., from these two hives, and put into a new hive, caged the Queen and put her in with them. In 36 hours I let her out, and now they are a good colony. I added other frames of brood from the other colonies however. Now I have three strong colonies that I have no doubt will winter safely. I did not extract any of this honey to test its quality. Next fall I propose to utilize this prairie to the extent of a barrel of honey, the season favoring.

This season has been considered a poor one for honey as every person here depends upon box honey for their supply. But with an extractor it would have been a tolerably fair one, the Basswood yielding abundantly. WM. M. CAKE.

West Independence, O. Oct. 7th, 1874.

Thanks for the item. We think you have made a move in the right direction friend C. We have often admired the Iron weed (*Vernonia*) but have had no chance to try the honey. May we petition for a jar of it if you succeed next season?

Can you give me one or two names of parties who will pay the best price, cash, for box honey of excellent quality—in 16 lb. boxes? We have about 1400 lbs. of such.

We have increased this season from 27 to 59 colonies, the 27 have made the honey above, besides 350 lbs. ex-

tracted. One colony gave 204 lbs. box honey and a strong artificial swarm. We have no losses out-doors in winter, no disease whatever. The honey is from Blue Thistle and White Clover—of the former there are hundreds of acres near us. O. M. Brown.
Winchester, Va. Sept. 29th, 1874.

Those who advertise for honey in our columns, will we think take all you can produce. The "Blue Thistle" must be of considerable value, especially if it furnishes honey *four months* in the year. Even if it is a bad weed, so long as Virginia farmers continue to grow it, we hope the bee-keepers of that section will endeavor to utilize the honey it produces, as far as possible. We think it can never prove a troublesome weed in any event.

FRIEND NOVICE:—I have thought for some time I would send you a report of this season's operations, and as we have got through extracting and looking over the bees preparatory to winter, have now got at it. We (I say we, for my wife and I are in company in this business, she does the work while I superintend, being disabled,) have 52 colonies, just what we had one year ago this time, and twelve more, than five months ago. We put upper stories on 34 of our Langstroth hives, put two colonies in Long Idea hives and four at making box honey. When white clover had done blossoming we had just one box of honey (6 lbs.), and that was over half full from the year before. They did better on buckwheat however, for we have about 150 lbs. now. The thirty six we extracted from, brought in about 4250 lbs., and *all* have enough to winter on, perhaps more. From the clovers we got 1300 lbs., we have several acres of Alsike, and it is splendid for bees, but Catnip for the amount of honey per plant, beats anything I ever saw. If all the catnip within range of our bees were gathered together, I don't think it would cover more than an acre of ground; but be that as it may, from what there was, our bees gathered sixty gallons that weighs over 12 lbs. to the gallon. I carry a little of the seed in my pocket all the time and when I see waste places on my farm that I think might as well be raising some honey as not, I scatter a pinch of seed. It will grow in fence corners or brush heaps first rate, and we are going to make such places useful. If it will pay to raise any plant for bees exclusively I think that plant is catnip—have so much faith in it that I shall try some next year at any rate.

The clovers are good, and catnip is good, but for a sure thing give me buckwheat. It has not failed to give a good crop of honey for seven years in succession to my personal knowledge. The honey crop is more certain than the seed; this year both are good. We have on hand now over a ton of honey from that source, and they gathered all their winter supplies from it, which would be about 1500 lbs. more. Buckwheat honey is dark colored and is not worth quite as much as clover, mine is for sale at 12 cts. per lb. here, barrels included. Catnip 14c. It is as light colored as clover but not of so good a flavor, at least in our opinion.

And now Mr. Novice if you think we have done well, take a good share of the credit to yourself, for I verily believe if it had not been for your so persistently urging bee-keepers to extract their honey we would have been "fooling with box honey" yet.

J. L. Wolfenden, Adams, Wis. Oct. 13th, 1874.

May continued prosperity be the lot of both you and your wife friend W. To you in your misfortune 'twould seem that she is a "helpmeet" truly. May we take the liberty to kindly suggest that she in her ambition be not allowed to do too much of the heavy work in the Apiary. A few men in our land show the effects of too much hard work, but far greater is the number of wives and mothers that even at an age that should be the prime of life, show unmistakable evidences of too much care, and alas too often also, the effects of work physically beyond their strength. Who has not occasionally contrasted the happy girl of 20, with the worn out woman of 40 or 50.

We should really like to hear from Mrs. W., for we feel sure from the way you write that she too has had a pleasant summer amid the bees. Scatter the catnip seed by all means.

Of course we can't help admiring the way in which you keep things lively about that apiary of yours; as we look in from month to month, we are forcibly reminded of looking in on a hive of busy workers, at the commencement of the warm season; we never find things *in statu quo*, as the latins say, but find that great changes are made even in three days. We are sorry you have got cider mixed with your winter feed, but if you had enough of those combs sealed up in August with sugar syrup, you will be all right yet. We think we can winter almost anything but from your description we don't want any cider in our winter stores.

J. P. Moore, Binghampton, N. Y. Oct. 12th, 1874.

We thank you for your good opinion friend M., but we can hardly feel that we deserve very much credit, when so many are going way ahead of us in increase of stock as well as surplus honey. We try to console ourselves by thinking if we do remain down towards towards "the foot of class" we probably shall be nearer the mass of our readers than if we were side by side with you and Doolittle, who get more box honey than we do extracted.

Don't know but I ought to say something about bees if it has been a poor season for honey, in consequence of the most severe drouth ever known, even by the "oldest inhabitant." From 21 colonies have taken 1700 lbs. honey and increased to 45 colonies.

Henry Palmer, Hart, Mich.

Will not *clean* old rag carpets, if whole, do for bee quilts? say two thicknesses—a strip of quilt might be put around the edges so that it would tuck down better and make tight, what think ye?

Wesley Brown, Homer, N. Y. Oct. 14th, 1874.

Old carpet does very well but they are more apt to be so hard as to kill bees, and in tearing them loose from the frames the propolis sometimes pulls out pieces that may thus get into the honey. The requisite qualities in a quilt seem to be softness, pliability, porosity and strength. We have made some experiments with various fabrics but none seem to answer all purposes so well as those we have described. Coarse woolen would many times do were it not for the fibres pulling out and making the hive untidy, to say nothing of its getting into the honey.

My report of Apiary is estimated at 2500 lbs. comb, 500 lbs. ext'd honey, and 66 swarms natural and artificial. Started to winter 48 hives, lost in winter, one, in spring, one, leaving me 46 for the above result.

J. L. Davis, Delhi, Mich. Oct. 10th, 1874.

Now I am an old man verging on 72 and have, all my days I may say, kept bees in different kinds of box hives. I am now trying frame hives; my frames are 12 inches deep by 16½ long, but the thing that bothers me is, the bees work their comb across the frames and also stick them to side of hive.

John Dawson, Pontiac, Mich. Aug. 23rd, 1874.

Have all combs built between two good ones and also put a finished comb next the side of the hive, if they persist in it. Some colonies seem much more disposed than others to build comb irregularly.

I think we shall have to put GLEANINGS on the list of the tardy—I have not rec'd the Oct. No. yet.

J. Pratt, Mallet Creek, O. Oct. 13th, 1874.

Now friend P., and several others, we hereby protest against being put on any such list, for we have mailed every No. so far, promptly on or before the 30th of each month, and we beg you in future to conclude that the Post Office Dep't has failed, that the cars are off the track or that Uncle Sam has suspended business, but do not we implore you, intimate that we have been so shiftless as to fail to mail Gleanings as heretofore. Should Novice get sick, you can depend upon it that P. G. or some one else will mail something, if it be no more than a printed postal card informing you what's the matter. In other words we pledge ourselves to let you hear something from us the first of every month.

If you wish to "stir up" Novice, ask him on a "postal" if any Gleanings was sent out for Oct. or April as the case might be, "cause why" you didn't get any. That they are promptly printed we are sure of but to avoid making a single mistake in mailing, we find more difficult for we occasionally do blunder; but by far the greatest source of mischief is the failure of subscribers to give the Counties. If you don't get every paper at the usual time, don't fail to drop a postal, and we will with pleasure make it right no matter who is to blame, but please don't ask any more "if we printed any."

I thought some of trying Bidwell's plan of wintering. For a beginner, have had excellent success during the summer—increasing from 4 stocks (purchased of A. Grimm) to 12 Simplicities. Most of them contain but 8 frames. Purchased 20, so they have built me some 50 combs. Took very little honey (ext'd) as my aim was increase. Am fearful for winter, but will make all necessary provision for the safety of the valued little fellows.

Geo. G. Scott, Dubuque, Iowa. Oct. 14th, 1874.

We are glad to know that Independence, Iowa, can boast of pretty girls, as well as the rest of the world. We were made aware of the fact by a Stereoscopic view of his Apiary, sent us by E. A. Sheldon. In going into an Apiary we always see the girls first if there are any—those in the view may be all married women for aught we know but that don't make a particle of difference; they have as good a right to be pretty as any body else. And now we think of it bee-keeper's wives *are* generally remarkably pretty women, that is when they *are not afraid of the bees*, if they are, we never see them—as we were saying we always see the ladies first and the bee hives next, then if there's a proprietor we generally make his acquaintance. In the above picture the chaps that take our eye are the ones in their shirt sleeves. A bee-keeper certainly wants his coat off when among the bees. The old gentleman reading his paper in his arm chair, as well as others scattered among the hives throughout the Apiary seem perfectly unconscious that bees can sting, and we presume friend Sheldon has so cared for them that such fears are entirely unnecessary. We see extra width hives as well as hives of only half the ordinary width, the latter presumably for Queen rearing, and the small trees planted so as to furnish a partial shade, give a very pretty effect to the whole Apiary. As our friend uses the extractor we venture to say that his labors would be considerably lessened if his hives were grouped at more regular distances; also we would want the grass kept down a little more in front of the hives. However, if he gets a large yield of honey as it is, perhaps it is just as well.

Would the warmth of the sun's rays prevent dampness and mouldy combs in the cold frame arrangement? If so I should say the cold frame is just what we have been looking for.

Jos. A. Savage, Cincinnati, O. Oct. 21st, 1874.

We think it will without doubt. Our house keeps everything as dry as it well can be, and damp or mouldy combs dry out in the warm sun and become sweet with the greatest facility. Our only trouble at present is to have the bees get back into their hives. Very likely Mr. Bidwell's plan of having the sash only 3 or 4 feet from the ground would insure the bees all getting back better, but that they should all find their *own* hives seems to us very improbable.

What is your advice in case bees have no pollen in their hives? Will feeding Rye flour during winter when they fly out be sufficient?

W. F. Coats, Columbus, Ind.

We hardly know that we have any advice to offer at present. Bees will not work on the meal in the winter unless we have weather quite warm and pleasant; such as we usually have here in March or April. We *have* known them however, to work on meal briskly in Feb., but seasons permitting much of it are unusual. If we could make the plan mentioned last month, of getting them to carry in meal under glass, work, we would be all right. There are plenty of days during March and April which furnish ample sunshine, if we could only keep off the cold winds. Our bees will pay no attention to the meal under the glass at present. We have written Mr. Palmer for further particulars of his experiment.

DEAR NOVICE:—I wintered 32 hives, lost one in winter and the rest were all in condition to become strong stocks by the end of May. In April we had one day they could fly out in full liberty, the rest were so cold that it was only at mid-day that some ventured to come out; no bees could get at the meal until the first of May and in the whole they did not store five ounces per hive. The Queens were so enclosed that they laid eggs from 4 to 6 in a single cell; in the first week of May the first pollen was seen, then we had four very fine days; honey and pollen were brought in at a bright rate and the Queens spread in 3 to 4 combs. Pollen was brought in until whole combs were filled with it. To-day, one month later, my bees are worse than two months ago; the old bees are gone, the young bees are more than needed for the brood work, and honey is so scarce that I am feeding every day. Instead of being strong by the first of June they are nearly all weak.

In three of my hives I had inserted empty combs, the Queens filled them and I at once gave three cheers for the new idea hives, but alas, to-day several whole combs are deserted; young larvæ are dried up and the Queens remain on one side playing their old April tricks of laying 3 to 5 eggs in a single cell. Instead of pushing the combs apart and inserting empty combs I now contract them, with division board in place etc. With strong stocks and ordinary seasons we know very well what to do, but in a season like this one, we certainly need all our brains and they need be sound. I have two straw hives of Elizabeth's time and those stand best in numbers in flight and weight. I have some fears that we bother too much with our bees, it may be that we would be better off if we prepared the hives at the commencement of the season with good worker combs and let the Queens manage their own affairs. I have lost this far 9 stocks and have 4 very weak ones on hand. What I want to know is this, has any one tried setting his stocks in his bee house in April, warming it to summer temperature and stimulating by daily feeding, and other care, and how did they fare? I shall try it next year. What we need is brood in early April, the more the better. On this depends all. I intend to make three or four New Idea hives in August and shall insert a division in the middle and have a laying Queen in each side, in October shall kill one Queen, and winter the rest; if this is not well then I go back to "Elizabeth's time."

Joseph Duffeler, Wequiock, Wis.

Your experience chimes with our own exactly friend D. If something cannot be done to enable us to rear brood in March and April even during bad weather, we certainly cannot accomplish the best results possible.

DEAR NOVICE:—Last year I bought two young colonies of hybrids, bringing each home in the evening of the day on which it swarmed. One stayed, the other "cut sticks" for the woods, next day. The contented one nearly filled its hive by fall, when I took out one frame of honey and equalized the distances between the others, and laying two grooved sticks across them for passages for the bees, put on the quilt, leaving off the cap, and put them in the cellar. They came out in good condition in the spring, and a large swarm issued on the 18th of June; and supposing that to be glory enough for one year, I essayed to destroy all but one of the Queen cells, but found the "sell" to be the other way, as another swarm rushed out in due time, when I again examined all the frames while the swarm hung from a bough, finding several cells more, and thinking it a sure thing this time, returned the swarm to the old hive. But in a day or two a swarm sallied forth somewhat larger than the other, when I gave up "beat" and hived them. They vied with the other colonies in numbers and industry.

On the 18th of July, finding the old hive pretty well filled, I took out the frame which was returned in the spring empty, but now filled with white clover honey, replaced it again empty, and adjusted a set of small frames for surplus, made according to directions of Mr. Burch in *B. K. M.*, of last year. And as the first swarm had almost kept pace with the old one, I placed boxes the same way over that, furnished with pieces of nice comb by way of a gentle hint for the bees, expecting both frames and boxes to be filled with the sweets of clover, as the pastures and roadside were profusely be-decked with its nectar-bearing flowers. It was *confidently* believed at any rate, as both colonies had already so nearly filled the bodies of their hives, that when Buckwheat burst into bloom the receptacles would no longer remain empty, as some two acres of that melliferous plant had been sown within 100 rods, while no other bees were nearer than a mile, and but 5 or 6 stands within bee distance.

But no signs of labor had appeared in the consecrated receptacles when your Aug. number came to hand containing the following sentence: "If our friend will excuse the liberty, we would advise him to put his surplus receptacles where neither he nor his bees will ever see them more." This had reference to a verdant question of mine about receptacles, and was a severe damper on my faith, but which I find to have been sound advice, as the receptacles are still empty, Sept. 15, and the buckwheat nearly played out; but as what we call Spanish needles—the pest of the corn field--are in full blast and the bees after them, I will let the frames and boxes alone a few days longer, that the bees may remain the party found wanting.

The bees have persisted in lounging about the entrances in large numbers, a few have been moping through the frames and boxes, and I know not how many have been inside, sanctimoniously "loafing around the throne."

Should my bees survive the coming winter, I intend to transfer the old colony to a hive like those occupied by the young ones, thus having all frames of a uniform size and shape, and send to you for an extractor to match.

STEPHEN YOUNG, Mechanicsville, Iowa.

From the dollar Queen I got of you last fall, I have raised 60 Queens the past season, and each one is a duplicate of its mother, and not one of them produces a black bee, with thousands of black and hybrid drones around. The same Queen produced 126 lbs. of box honey the past season besides. Also add for Adair's special benefit that all her wings are cut close to her body and that she has five legs, as the bees "hugged" her in June so she drew one leg behind her and I cut it off to have it out of the way. Would not take $25.00 for her to-day.

G. M. DOOLITTLE, Borodino, N. Y. Oct. 5th, 1874.

Some of the Journals, (the *World* especially) seem to have had grave doubts of the possibility of the dollar Queens proving equal to the higher priced ones, and considerable pains has been taken to caution the public against them. That Queens hatched by artificial heat would prove fully equal to others, of course we had no means of determining only by experiment; accordingly we have anxiously awaited reports from them. Not a single unfavorable one has come to hand that we know of, and the one mentioned by Mr. Quinby in Sept. No., as well as the one above, were both hatched in the Lamp nursery, for we sold no others.

Eighty-eight stocks Italians, all full, from 17. June 1st. Every Queen's wing clipped. Raise Queen—as soon as she lays, fill up with combs—brood from strong hives—Champion hives.

E. D. GODFREY, Red Oak, Iowa.

The above came on half a postal card, but we presume our practical bee-keepers will find it perfectly intelligible. Pretty well done even if there was no surplus, was it not?

C. Wurster of Kleinburg, Ontario, Canada, writes quite a lengthy article detailing his loss of Queens, while extracting, and in spite of various precautions. He says:

> I lost one or two Queens from 15 stocks at every operation. I extract every three days; in the midst of a flow of honey giving from 5 to 15 lbs. per hive, per day, this is no small loss as you well know.

We certainly do know, for in our earlier experiments we did lose a few, perhaps three or four in a season, out of 40 colonies. The season after, we made up our mind that this must be remedied, and accordingly, put our hives directly on the ground, cleaned away all grass and turf, and with sawdust, fixed each hive so that no crack or crevice remained that a Queen or young bee could by any mistake crawl into. Since then we have lost almost none at all while extracting, and yet we never see the Queen while handling the combs for this purpose unless by accident. Opening hives when there is a great disposition to rob, is liable to cause demoralization of the colony and even loss of the Queen; so of late we have only worked our extractor when the bees seemed peaceable. When much robbing is going on, you can take it for granted that but little honey is being gathered, and therefore 'tis as well to give up extracting for the time being.

Friend W. inquires why it is that others say nothing of similar troubles; we opine 'tis because they have their hives arranged as we have mentioned. Having hives very close together, will often result in loss of Queens, simply because in extracting, some bees will crawl into the wrong hive, and attack the Queen before being aware that their unusual upsetting has changed their locality.

We have been inclined the past season to decide that nearly all the parricidal attacks which have been so frequently mentioned in the Journals, have been caused by bees from hives that were placed too near, getting in by mistake, and that the stinging is after all not parricide.

We remarked this, on finding Queens thus attacked most frequently, where we used double hives with the entrances near each other, and especially where we used *wire cloth* division boards. We are inclined to think the trouble with friend W's bees much owing to his having placed his hives too near each other; we judge this because he says the trouble was the same, even when the frame containing the Queen was left in the hive without extracting. With hives arranged as far apart as they are given in the Hexagonal Apiary, we think no such trouble will be experienced.

When they are first set out in the spring, there is quite a tendency for them to get into neighboring hives, and accordingly we frequently hear of bees hugging or killing their Queens at such seasons.

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal	($2.10)	$2.35
" The Bee Keeper's Magazine	(1.25)	1.75
" The Bee World	(2.10)	2.60
" All three, The Bee Journals of America,		5.00
" American Agriculturist	($1.60)	$2.10
" Prairie Farmer	($2.15)	2.65
" Rural New Yorker	($2.50)	3.00
" Ohio Farmer	($2.15)	2.65
" National Agriculturist	(1.25)	1.75
" Scientific American	($3.15)	3.65

[*Above rates include all Postage.*]

Books for Bee-Keepers.

SENT postpaid on receipt of price.

Langstroth on the Hive and Honey Bee	$2.00
Quinby's Mysteries of Bee Keeping	1.50
Bee Keeper's Text Book, muslin,	.75
" " " " paper,	.40

Good Books.

These, though not specially designed for Bee-keepers, have a tendency to inculcate principles that ensure success in bee-keeping as well as almost all other rural pursuits.

The first on the list should be in the hands of every one who has planted grape vines to shade the hives, as we have advised.

Any of these books will be forwarded by mail, *post-paid*, on receipt of price.

Fuller's Grape Culturist	$1.50
Fuller's Small Fruit Culturist	1.50
Fuller's Strawberry Culturist	.20
Fuller's Forest Tree Culturist	1.50
Henderson's Gardening for Profit	1.50
Henderson's Practical Floriculture	1.50
Tim Bunker Papers	1.50
Ten Acres Enough	1.25
Roosevelt's Five Acres too Much	1.50
Art of Saw Filing (Holly)	75
Window Gardening	1.50
Lenchar's How to build Hot-Houses	1.50
Play and Profit in my Garden. Rev. E. P. Roe.	1.50
Waring's Draining for Profit and Health	1.50
Onion Culture	20

Averill Chemical Paint.

THE *ONLY* RELIABLE.
THE *MOST* BEAUTIFUL.
THE *MOST* ECONOMICAL.
THE *MOST* DURABLE.

Requires no oil thinner or drier,
Requires no waste of time in mixing,
Has stood *eight years' criticisms*
With *yearly increased popularity*
And *yearly increased* sales.

Is sold by the gallon only, in packages of from 1 to 40 gallons each, in Purest White and any Color or Tint desired.

Address, for sample card of colors and price list,

Averill Chemical Paint Co.,
Office and Factory 132 & 134 East River Street,
CLEVELAND, OHIO.

PLEASANT AND PROFITABLE EMPLOYMENT, for male or female, in every city of the Union. Active persons can double their small investment every day. Inclose STAMP for particulars to

THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago.

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Also full colonies of Italians in Langstroth hives for sale at $15.00 per colony.

Address DR. J. P. H. BROWN, Augusta, Ga.

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular. Wm. W. CARY,
1tf Colerain, Franklin Co., Mass.

GOOD Rye Straw Mats for $3.00 per dozen. Sample by mail 50 cts.
9t12d A. N. DRAPER, Upper Alton, Ill.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

G. W. Dean, River Styx. Medina Co., Ohio.
W. J. Hosmer, Janesville, Minnesota.
Dr. J. P. H. Brown, Augusta, Georgia.
R. S. Becktell, New Buffalo, Mich.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

J. H Martin, Hartford, N. Y.
Geo. T. Wheeler, Mexico, N. Y.
H. Alley, Wenham, Mass.

In order to hasten the introduction of the
☞ STANDARD ☜

Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground	$2.00
Twenty frames for above 5¾ c. each	1.15
Sample Frame, by mail,	10
Quilt	40
Or all complete except painting, for	3.50
The same in a bundle including nails, hinges etc,	3.25
Extractor made expressly for Standard frames, (Comb frame 14¼ wide, by 10 deep.)	$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

Clark & Holcomb,
HONEY LABEL
PRINTERS,
Medina, - - -Ohio.

PRICES:

1000, Gummed and Cut,	$2.75
500, " " "	2.00
250, " " "	1.50

Sent post-paid on receipt of price.
Samples sent if desired. Address,

CLARK & HOLCOMB, Medina, O.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross,………………	$6.50
Two " " " " ………………	8.50
Corks, " ………………	.75
Tin Foil Caps, " ………………	1.20
One and Two Pound Labels, per gross,…………	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,..	19.00
Labels for above, " "	.65
The same with printed address, per 1000	4.25

I shall have on hand and ready for shipment from the 15th of June, a large lot of 1 and 2 pound square flint (white) glass honey jars. They are of the same style as my other jars, which are by this time well enough known.

I shall sell 1 lb. (white) flint Glass Jars per gross	$9.00
2 " " " " " "	11.00

In lots of 10 gross or more, the same as the others, 50 cts. less per gross.

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

UNCAPPING KNIVES.

As good as any.

Each……………………………………	.50
Per doz…………………………………	$4.50

For further particulars, Address,

1tf CHAS. F. MUTH, Cincinnati, O.

THE BEE WORLD.

OUR Bee Journal of the Southern States. Issued monthly at $2.00 per year. Sample copies free.

Address A. F. MOON & Co. Rome, Georgia.

NORTH AMERICAN
BEE-KEEPERS' SOCIETY.

OFFICERS: Seth Hoagland, Mercer, Pa., President; Abner J. Pope, Indianapolis, Secretary; J. S. Hill, Mt. Healthy, O., Treasurer; D. L. Adair, Hawesville, Ky., Cor. Secretary. With one Vice President in each State, Territory and Province.

The Society will hold its Fourth Annual Session at Pittsburgh, Pa., on the second Wednesday, (11th day,) of November, 1874.

The payment of $1.00, annually, entitles to Membership, and a copy of the Transactions, when published.

ILLUSTRATED JOURNAL A magnificently Illustrated Monthly, with **Chromo** $2.50 a year. Send **10 cts.** for sample copy, or **30 cts.** for sample Chromo, terms to agents, etc. **Canvassers Wanted,** in every town, county & State. Address THOMAS G. NEWMAN, Room 27 Tribune Building, Chicago.

NEW YORK HONEY HOUSE.

No's 208, 210 and 212 South Fifth Avenue, Corner of Grand Street.

Cash on delivery, paid for Honey.

9t11d S. E. SPAIDS.

Philip's Southern Farmer.

Memphis, Tenn.

ONLY two dollars per annum for a Journal devoted to agriculture, horticulture, bees, stock and poultry. The acknowledged peer of any monthly in the South. Send your address and get a specimen. ADVERTISE your stock and poultry in the Farmer.

Address as above. 11t2x

GLASS HONEY JARS.

1 ℔ Round Jars per gross…………………………	$5.50
2 " " " " " …………………………	7.50
Corks " " ………………………	75c to 1.00
⅓ pt Honey Tumblers plain or ribbed per doz……	.40
Six doz. in a box. Packages each…………………	.40
½ pt Honey Tumblers plain or ribbed per doz……	.50
Six doz. in a box. Packages each…………………	.45
⅓ pt Honey Tumblers *Tin Top*, per doz…………	.65
Six doz. in a box. Packages………………………	.45
½ pt Honey Tumblers Tin Top, per doz…………	.75
Six doz. in a box. Packages………………………	.50

Also, Window Glass, Lamp Chimneys, and Glassware of all kinds. For sale by B. L. FAHNESTOCK. Late B. L. Fahnestock, Fortune & Co. Glass manufacturers, 76 Wood St. Pittsburgh, Pa. 9d

FOR 50 CENTS we will send **The National Agriculturist,** a large, live, 16-page illustrated family paper, six months on trial, or with large first class chromo *Flowers of Paradise*, 15½x21 inches, for $1.00, and extend the time six months free to agents sending subscribers, besides large cash commission or premiums. **The Bee-Keepers' Magazine,** same terms. Terms to Agents sent free. Address **H. A. KING & CO., 75 Barclay Street, New York.**

QUINBY'S NEW SMOKER.

ALL who expect to manage bees successfully, will want the best method yet devised of using smoke. By putting old rags, rotten wood, or other material in a tin cylinder, and working a small bellows with one hand, smoke can be directed to any point, in quantities to suit. Price $1.50. Sent by mail $1.60. They are now improved by being made without solder.

Send for circular and price list. 7tf

M. QUINBY, St. Johnsville, Montgomery Co. N. Y.

NEWSPAPERS Through our Club Cheap. **NEWSPAPERS** We furnish all Magazines. Leslie's papers, regular price $4, our price $3.40. All other papers equally cheap, some cheaper. **BOOKS** All kinds, to members of our club at **BOOKS** 1-5 less than retail price.

Address for CLUB LIST and BOOK circular:

E. KRETCHMER & Co. Coburg, Montg'y Co. Iowa.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Lithograph of Apiary, size 12x16, Mailed Free, Postpaid, $1.00, or Lithograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume 1, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE

Or how to Realize the Most Money with the Smallest Expenditure of Capital and Labor in the Care of Bees, Rationally Considered.

PUBLISHED MONTHLY, AT MEDINA, OHIO,

BY A. I. ROOT & CO.

Vol. II December. 1874. No. 12

In the Preparation of this Journal the following are the Principal Periodicals Consulted:

American Bee Journal. *Clarke, and Mrs. Tupper.*

Bee-Keeper's Magazine. *King.*

Bee World. *A. F. Moon & Co.*

[*Also Bound Volumes of the former since 1861, and Files of all other Bee Journals that have been Published in America.*]

American Agriculturist,

Prairie Farmer,

Rural New Yorker,

Country Gentleman,

Ohio Farmer,

Scientific American.

CONTENTS:

Page.
How to Conduct an Apiary....................133
How to build a Wintering House............133
Preparing Bees for out-door Wintering......134
Cider deleterious to bees....................135
The secret of getting surplus honey..........135
Bee-Keeping in California....................135
How to manage for box honey..................135
Our own Apiary...............................136
Housing bees for winter......................136
Experiments with bees under glass..136, 137, 138
Remarks in regard to out-door wintering...139
Experiments in regard to the Bee disease....139
Honey Column.................................139
The great Honey crop from California.......139
Reports Encouraging..........................140
Page
Bee-keepers of Onondaga Co., N. Y..........140
Implements, Devices and suggestions........140
Tool for cutting winter passages............140
How to secure strait combs every time.......140
Feeding meal in the fall....................140
Heads of Grain..............................141
Spring swarming out and lack of pollen......141
Raising Hemp for pollen.....................142
Flying bees in a room.......................142
Golden Rod and Aster........................142
Universal Feeder............................142
Tent for extracting.........................142
Problem No. 25..............................143
How to make a division board................143
Wormwood for smoking bees...................143

DEALERS IN SUPPLIES FOR THE APIARY.

IN response to our call for catalogues and price lists we have received very few *printed* circulars or lists as yet. One reason is perhaps that in our industry so far, the most voluminous circulars, and flaming advertisements, have emanated from the "biggest humbugs." So long as such is the case we cannot blame a hive maker, or Queen raiser for concluding to let his goods be an advertisement in themselves.

Where much business is done however, some kind of a circular seems almost a necessity to save laborious correspondence.

FRANK BENTON, successor to Hamlin & Benton, sends a neat circular of Queens, Colonies, Extractors etc. Edgefield Junction, Davidson Co., Tenn.

GEO. T. WHEELER, Mexico, N. Y., sends a neat little book containing much valuable matter. His prices for hives, frames, and honey boxes, are quite reasonable.

As we have had something to say in regard to Mr. *T. H. B. Woody*, we append the following note from friend Wheeler:

In response to your call I send my circular and price list. Mr. T. H. B. Woody, was highly recommended to me as an agent, so I gave him control of a large territory, and let him figure largely in my circular etc. But I find he does not deal fairly with his customers and has not with me, therefore I erased his name from my circular, as you see.

J. H. MARTIN, Hartford, N. Y., makes hives arranged either for box or ext'd honey.

DR. JEWEL DAVIS, Charleston, Ills., makes Queen Nurseries and Extractors.

T. P. ANDREWS, Farina, Ills., makes hives at our list prices.

We will continue the list next month. Our own circular, we enclose with this No. You are all at liberty to read it over just as often as you like. Aren't we clever?

SOME OF OUR "WARES."

OUT of a number of flattering letters rec'd from the recipients of our Lithograph of the Hexagonal Apiary we select the following:

A. I. ROOT & CO.:—My best thanks for your design of a well regulated apiary. Your idea is a good one and it will not fail to help in developing good taste, and besides this it will be a stimulus.

In regard to present given every old subscriber who renews before *Jan. 1st*, he also writes as follows:

My best thanks also for "——and —— ——." It is a good —— and has found a place among my best friends in the family ——. CHAS. F. MUTH, Cin., O.

DEAR NOVICE:—I here send you 75c to renew my subscription to "GLEANINGS," and don't forget to send that whistle, or whatever it is, I hope it won't be a house and lot in a city, for I don't know what I should do with it. LUCIUS SNOW, Blakesburg, Iowa.

I am very much pleased with your picture and think the plan and arrangement A No. 1, and will be the means of stimulating many of our bee-keepers to greater exertions in care and neatness.

WILL. G. SMITH, St. Louis, Mo.

MESS. A. I. ROOT & CO.:—If you can make the corners to suit, I will certainly put them to all my frames, and I have now 50 new hives that I would fix with them, for they are the best thing I have seen yet. Or if you can give me the reason why ⅞ wide is better than 1⅛, I will certainly adopt them. Please let me know if the North American Bee-Keepers' Society have adopted a standard frame, if so what is the size?

PAUL VIALLON, Bayou Goula, La. Nov. 17th, 1874.

P. S.—I have taken 50 lbs. box honey from my colonies in the month of Oct., which is very good for one month.

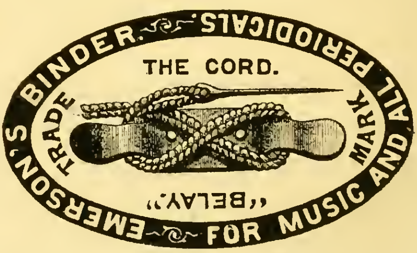
Before deciding on ⅞, for width of top bar to frame, we supposed we had experimented enough to be sure that such would in the end be the decision of at least the majority. The average thickness of worker comb is about ⅞, and the bees seem less disposed to bulge the combs out, toward the top bar, to a greater thickness, than when these bars are made one inch or more. Also, if frames are placed about 1½ inch apart, with 1⅛ top bars you have only ⅜ space to insert the ends of your fingers in removing a frame; for the same reason we find greater difficulty in lifting any frame desired, the broad top bars not permitting the amount of play, without killing bees, that the narrow ones do. To illustrate the matter best, fill a hive with frames of all width tops from ½ inch to 1⅜; let it stand through one honey season, so that the combs may become crammed with honey; we think you will find the frames with narrow tops will be much the easiest to remove. It is highly important many times to get out the frame containing the Queen before she can have time to hide or get off on the bottom or sides of the hive, as in the case of black and hybrid Queens, and to do this we must have frames easily removable. We know of no argument in favor of broad, or close fitting top bars, except that they act as a honey board in confining the heat of the brood cluster; happily a close fitting well made quilt answers every purpose, and with Doolittle's excellent idea of packing straw above the quilt in spring, they may be kept as warm as kittens. Friend McGaw of Monmouth, Ills., mentions a colony of bees that gave a strong natural swarm in March. This colony was covered with a *real bed quilt*, and had access to to some hives belonging to a neighbor from which the bees had all died, leaving full combs of buckwheat honey unprotected.

TULIP, LINDEN, and other honey producing trees. Send for catalogue.
$1p A. BATTLES, Girard, Pa.

BEE HIVES and surplus boxes of any style in use, or anything used about the Apiary, furnished at the lowest prices. H. ALLEY, Wenham, Mass. tfx

CATNIP SEED, fresh and good, 50c per ounce.
J. L. WOLFENDEN, Adams, Wal Co., Wis. 75p

CATNIP SEED for sale at 25c per oz. Address
A. A. RICE, Seville, Medina Co., O. 11tf



You cannot look over the back No's of GLEANINGS or any other Periodical with satisfaction, unless they are in some kind of a Binder. Who has not said—perhaps only mentally—"Confound it I *must* have last month's Journal and it's no where to be found." Put each No. in the Emerson Binder as soon as it comes and you can sit down happy, any time you wish to find any thing you may have previously seen even though it were months ago.

Binders for GLEANINGS (will hold them for four years) gilt lettered, free by mail for 50, 60, and 75c, according to quality. For table of prices of Binders for any Periodical, see Oct. No. Send in your orders.

A. I. ROOT & CO., Medina, O.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Vol. II. DECEMBER 1, 1874. No. XII.

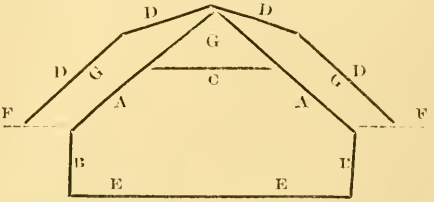
HOW TO CONDUCT AN APIARY.

No. 12.

VERY many of our subscribers in different localities write us they have never lost any bees in winter from any cause other than starvation, and these fortunate people *some of them* so far ignore the statements coming from their less fortunate brothers, as to declare they don't believe bees ever do die, where they have food in abundance. Other writers have declared that small colonies are the trouble and that they don't believe a colony with plenty of bees and sufficiency of food ever dies whether in-doors or out. Now although these have never had any personal experience with this serious drawback in wintering, with hives having plenty of bees and ample stores, would it not behoove them to carefully read the reports of the sufferers, and "go slow" in deciding where the whole trouble lies.

Were we to judge solely from our own locality, we should in many things be led to think differently from what we do when we take the reports from the country at large. Although isolated cases seem occasionally to point strongly in favor of out-door wintering, the testimony when summed up is very strongly in favor of housing in a frost proof repository; bees having many times survived when thus cared for, in localities where almost all others were swept off. So many bee houses are in use not really *frost proof*, that *good* cellars have rather given the best results. We really are not sure that a bee house can be so constructed above ground as to be as perfectly free from change of temperature as those in part, or entirely underground. When we dig down to a certain depth, entirely below the reach of the frost for instance, we find the ground almost of a uniform temperature the year round. This temperature is fortunately between 40 and 45°, in fact, just what we need to keep our bees in that semi-torpid state in which the consumption of honey is reduced to an amount so small that we often hear it stated that they consume none at all; they also seem to awaken in spring from this torpor (when the proper condition is maintained) almost in the same state so far as age is concerned as when they went in. This in fact *used* to be all that was required, and some contend that 'tis all that is required still, but we think this position will have to be given up. Since our wintering troubles, Quinby we believe, and some others have suggested that all that is required, is to keep them a little warmer, say from 45 to 50°, or even as high as 55°; such a condition for instance as we have in a cellar directly underneath the family sitting room. We believe many experiments have decided that this don't do either, and in fact nothing ever has amounted to a "row of pins" if we may be allowed the expression, except fine weather that allowed the bees to fly. All agree without exception that as soon as we have settled warm weather, allowing the bees to fly and gather pollen, all mortality ceases, and even the weakest nuclei, can in June and July be built up to strong colonies. Hence the position that, if bees are perfectly healthy in warm weather, cold must be the cause of the malady.

Our bee house cost us over $200.00 and yet it isn't frost proof unless it contains 40 or 50 good colonies; again, if we have several days of quite warm weather, it is impossible to keep it cool enough to have the bees stay in their hives, unless we should carry in lumps of ice as has been recommended. Yet friend Blakeslee says he feels sure he could keep bees safely in his cellar any day in the year, the temperature being nearly the same both winter and summer. Now comes the question; if cellars are better, why not use them? The principal objection we know of is that they are generally remote from the hives and are often inconvenient of access, besides they should be kept perfectly dark and this necessitates dividing off an apartment by some kind of a partition—thick paper does very well—and this often encroaches on the space needed for the family vegetables etc. Besides we want our wintering house to serve for a honey room in the summer. In view of all these items we are going to suggest a wintering house built partly underground, and covered entirely with 18 inches or two feet of dry earth. We have just built such a room as an addition to our small hot house, and the entire expense of it, labor and all, was not one fourth that of our bee house. Where it is necessary to economize it can be made to answer very well for a honey house, and will be nice and cool for summer work. Get five pieces of 4x4 pine or hemlock scantling, 16 feet long.



Cut them in two exactly in the middle, on a bevel, so that their ends will fit together rafter fashion at the tops while the bottoms are just 12 feet apart. In the accompanying diagram which is drawn on a scale of $\frac{1}{8}$ inch to the foot, A, A, are these rafters resting on posts B, B, made almost 3 feet long. These latter should be sharpened and driven into the floor of our room about 6 inches, this will leave them $2\frac{1}{2}$ feet high on the inside, and as they are to be level with the general average of the ground F, F, on the outside, our room is supposed to set in the ground about $2\frac{1}{2}$ feet. C, is a piece of 2x4 scantling strongly spiked across A, A, just high enough up to allow the proprietor to walk under, unless we can afford to make a little extra provision for visitors, a matter depending somewhat on our resources. When this is done, get some cheap pine boards (ours cost only $12.00 per M.) and nail on the inside, at both top and sides. Use 10 penny nails and nail strong. When this is done put earth overhead and at the sides, G, G, G, at least 18 inches thick. Then cover all with a shingled or board roof something like D, D, D, D. If short bits of boards are nailed from the rafters A, to the rafters D, at frequent intervals, the whole structure will have something the strength of an arched bridge. The dimensions of the room inside on the floor E, E, are 10x12 feet; it will hold 100 ordinary hives. In case the Bidwell process proves a success, and it bids fair to prove so, you can at any future time add on a similar structure to either the east or west end, having the south roof all glass. This is to be used as a voiding room when colonies become diseased before the weather is suitable to put them out.

We need hardly add that provision must be made to keep such a room perfectly dry. If the land lies in such a way as to render it likely that water will soak under the walls, it will be necessary to cut a deep ditch all around it, and to provide a good underdrain.

P. S.—We would nail the boards on the inside to prevent bumping our heads against the rafters. The whole expense of materials need not exceed $10.00, and not more than $15.00 more, if the apartment with glass be added. Double doors afford access, and the outside one is to be made like an outside cellar door.

In our Nov. No. of last year we mentioned having prepared nine colonies for winter on their summer stands. These belonged to Dr. J. H. Salisbury, Cleveland, O. As we remarked then, we did nothing but to equalize the stores of some, removing all honey and combs ni upper stories, and covering the frames with nothing but their accustomed quilts, making no provision at all for any more ventilation than is afforded under the cover of the Simplicity hives. These bees all wintered finely. No dead bees, no trace of dysentery, and no particular weakening down in the spring, yet they stood unprotected on the summit of a hill, exposed to blasts from Lake Erie of such force as to render it necessary to keep a couple of bricks on the Simplicity cover to prevent their being blown off. Now *why* did these bees winter well and come out with their combs all so clear and bright? Had we used straw mats, or given some peculiar ventilation, or had them in somebody's patent hive embodying some great discovery or other, what an excellent chance here would be for a testimonial. We are very happy to say however, that there was nothing at all peculiar in their management. Nothing unusual was found in the hives, unless it was that the honey was *all nicely sealed up.* So far as we can recollect, and we noted all conditions carefully, the whole of the nine hives contained almost *no unsealed stores.* The Doctor declares he gave them no attention after we pronounced them all in order.

We have just been out to prepare the same Apiary for winter again. They ext'd about 100 lbs. of honey from the nine, in June or July, and made seven artificial colonies; the whole 16 are in the same condition as we found them a year ago, unless it be that they have more honey. The hives are too full; almost every space being filled up solid. One hive only, we thought might possibly need a comb from one of the others, and in lifting a comb out, we broke into one side of the cluster which was in the form of a perfect sphere, and perhaps a foot in diameter,—the day being rather cool—now the bees that we unceremoniously pulled out, at first seemed to be dead—for all the world like a nest of ants, such as we sometimes find in splitting timber in Jan.—but soon began to move feebly, and finally stirred around until they revived enough to show they were hybrids. These bees were dormant, or very nearly so; they were so densely packed and knotted, that it seemed as though separating the combs would tear them in two. The temperature was then perhaps a little below 50°. Is it not possible that if they could be kept at just about that point until next April, they would winter without food? The way in which they were packed in the empty cells from which brood had emerged renders it seemingly impossible that they could move about to get food, unless the cluster greatly enlarged. We feel sure that at least one of the requisites for such successful wintering, is being fed early, that their stores may be all sealed. Perhaps another is that after they get thus nested, they be not *roused* up in cool weather, as friend Bolin has suggested. Is it not likely that after being stirred up, they commence eating and then perhaps get a derangement of the—ahem, "bowels?"

The Doctor certainly has very little trouble with his bees, yet they are increasing yearly at a rate that begins to look serious to him, as he only proposed to get enough honey for family use from the three stocks he procured in 1872.

Now here is a point: his time is too much occupied to attend to so many himself. No one can be hired to extract the honey when it should be done, as he has proved by actual trial. The principal crop of honey seems to be from the Autumn Flowers, perhaps principally from the Golden rod, as we decided by the flavor of several "chunks" gouged out of some of the most tempting looking combs with our pocket knife. The honey is very thick, of a rich golden color, and of flavor—well, preparing an Apiary for out-door wintering as we do it is not a very unpleasant task. As usual we forgot our point which was this: that during the cool autumn weather, bees will not store honey in an upper story as they will in combs at one side, for we find the lower story crammed full. Again if the Doctor had had Standard hives instead of Simplicities would he not have had 20 combs filled with honey, or nearly that, instead of 10? We think he would, judging from appearances.

The Doctor's wife furnished a moral to this long story by relating that by great care she had succeeded in rearing about 200 chickens at one time in the spring. As they were valuable stock she gave them extra care until they began to die at the rate of a pailful a day; finally she became discouraged and in despair concluded they might all "slide." "Slide" they did into the woods and pastures, and by "scratching for themselves" or for some other reason, they became strong and healthy, and no more died.

For fear some of our friends may accuse us of being contradictory we will say that we understand Old Dame Nature means us to read the moral thus: "Be diligent industrious and faithful, but beware how you by mistaken kindness upset the natural course of things." Attempting to rear brood in a Green house may be like the "chickens" so perhaps our friends had better wait until we have tried "Glass" one season before they invest much in it.

P. S.—The colonies mentioned were not particularly strong, in fact two or three were rather weak in numbers; had there been a cider mill near by, in full blast four months in the year, as there is near us, we opine 'twould somewhat disturb their "torpidity."

J. G. Sough of Shelby, O., has just paid us a visit and among other things, mentioned that a neighbor had a barrel of cider that was leaking, and as the bees seemed willing to save it, he allowed them to do so, but to "save" the bees after this diet, was more than he was adequate to.

[For Gleanings.]

THE SECRET OF GETTING SURPLUS HONEY.

BY G. M. DOOLITTLE.

FRIEND NOVICE:—We see from your remarks under our report in Nov. No. that you, and perhaps most of the readers of GLEANINGS, are laboring under a mistake in regard to our increase. You will see by referring to said report that the 3674 lbs. box honey was taken from 37 old stocks in the spring, and a part of our increase came from them and were boxed of course. Now for our method with our small hives holding 9 Gallup frames, and *we would use no larger*. In the spring (as soon as the first of April), we fill our caps with straw pressed in with a follower as tight as our weight (which is 243 lbs.) will press it. This brings the straw on the quilt pressing it firmly on the frames and by the next day, if we raise the cap and put our hand between the quilt and straw, it will feel somewhat like putting it in an oven, while without the straw the quilt is as cold as a stone. This sets the Queen to laying and the bees will hatch the eggs unless we have winter all the while, as we did last spring. Now if you know each stock has a Queen and plenty of honey, let them alone until pollen becomes plenty which is with us, from the first to the tenth of May, then go to each hive, and if the bees will bear spreading a little more without danger of chilling the brood, take a frame of honey from the outside, break the sealing by passing a knife flatwise over it, and put it in the centre of brood nest. In ten days go over with them again and so on and when warm weather comes, in June, go over with them every four days putting one frame in the centre each time, and you will find the Queen will fill it every four days besides keeping all the empty cells filled which are daily vacated by maturing brood. By the way, this has proved more satisfactory to us than any or all the methods given for feeding to stimulate brood rearing. Don't commence to spread the brood unless you are willing to do all in your power for the well being of your bees. We have known a certain bee-keeper to carry all swarms that he in any way suspected would suffer from over spreading, during a cold snap, into a warm room until it became warm again. But to return, by the 25th of June, every available cell should be filled with brood and the hive full of bees. By this time white clover is at its hight and if your bees swarm they do well, and those that don't swarm *do better*. If they are getting honey to any amount put boxes on all that do not show signs of swarming in a few days, but keep the boxes off the rest, unless they are getting honey quite freely. At this season of the year we always like to put boxes on when the hive is so full of brood, and the bees so anxious for some place to put honey, that they will commence putting honey in the first boxes before we have the last ones on. When basswood appears put on all boxes, and by this time your new swarms should have their hives two-thirds full of comb, and the old stocks their young Queen just commencing to lay. Those that have not swarmed will have some boxes ready to take off, and will get nearly as much honey after this as the old and new together if they had swarmed. It is no trick at all to get 8 lbs. of honey put in boxes in a day if you have your hive full of brood and bees, and honey is plenty. They have got to put it in the box or nowhere. Gallup gave us the secret in the *A. B. J.* years ago when he said "get the bees and they will get the honey if there is any to be had." Keep an eye out, and do things in the right time.

If we had waited 6 or 8 days longer this year before putting on our boxes we should have got nothing. We have come to this conclusion in regard to profit in bee-keeping and consider it perfectly safe; that each old stock in the spring that has a quart of bees will make 80 lbs. of box honey if the season is good. If they swarm the two will make that, and if they do not they certainly will. One man can with ease tend one hundred stocks worked for box honey. Now allowing every other season a poor season, so that the bees do nothing, (if they make some honey you sell it to buy sugar to feed them with) and you have two tons of honey for each year. Twenty five cts. is the lowest price for nice box honey so you will have $1000 each year as an income. I am speaking of an Apiarian whose knowledge is equal to 100 stocks and not of one to whose knowledge two stocks are equal.

Borodino, N. Y. Nov. 10th, 1874.

P. S.—We never saw basswood secrete honey as it did this year. By taking two stems of blossoms and joining them in the palm of your hand you could turn 3 or 4 good thick drops of honey out of it.

Many thanks friend D., but we fear we have not more than a half dozen readers who can accomplish the result you mention with *box honey*, simple as it appears as you state it. We have repeatedly tried nearly the same plan and yet have now only half filled or empty boxes. We have used straw over the quilts but not pressed down, which is very likely an important point. Why not keep this packed straw—which is equivalent to a straw mat and much cheaper—on the hive all winter as well?

BEE-KEEPING IN CALIFORNIA.

BY GEO. B. WALLACE.

A. I. ROOT & Co.:—Since my arrival here one year ago, I have not had the pleasure of reading GLEANINGS and now my thirst for old friends is my apology for this missive. One year ago I arrived here with 4 Italian Queens in Langstroth nuclei. Wintered them and with the help of an apiary here, I succeeded in rearing one or more Queens every month during the winter. In March I started business with 48 stands of bees laboring against many unfavorable circumstances, such as the want of surplus hives etc. In consequence many a fine swarm took leave for the tops of the mountains. Now for the result: I have taken over six tons of choice honey by extracting and now have between 30 and 40 hives, two stories and full, but will leave them until another year strengthens my courage. We have now formed a Co. of three persons and have 300 stands; have 3 apiaries, each containing 100 stands and have built long sheds covered with shakes, and wide enough to contain two rows of hives which front outward on each side with 5 ft. alley in centre for wheel room. We have employed a cooper to make 250 bls. of Fir timber, which we think will not require to be waxed. If you desire I may at some time give a description of the manner of handling bees in this country. Send paper to Arrow Head Mountain Bee Co., San Bernardino, Cal., Nov. 6th, 1874.

OUR OWN APIARY.

EVEN with the curtain down, the heat has been so great to-day (Oct. 29th) that we made a door of wire cloth and now begin to think the sole cause of the bees dying may have been the high temperature. The following note from friend Palmer corroborates this view.

> The colony under glass seemed to "thrive" until it was warm enough for those outside to gather pollen. When the thermometer indicated 20° in the shade outside it marked 50° to 55° under the glass; when it was 50° outside it was 80° to 90° inside. Then the bees commenced to die and I let them out. Is it any wonder the bees died in 90° of heat and no fresh air?
>
> Thanks for the picture. H. PALMER.
>
> Hart, Mich. Oct. 26th, 1874.

Nov. 2nd—We have at length had a day so cold, that the temperature out doors even in the sun, was not such as to induce bees to fly, and the green house does much better. In fact the bees now scarcely touch the glass, and yet they work on the meal almost as lively as if 'twere spring. The strong stocks are rearing brood nicely, but the cool nights have spoiled all but the eggs in our pet nucleus.

The house is too hot days, but too cold nights; to obviate this, we are about to build on at the end, so as to more than double its capacity, yet using the same sash which is about 6½x13. Every part of it except the glass is to be covered with a thickness of about 18 inches of dry earth to prevent frost from penetrating; and to keep all dry it has an additional protection of shingle roof over all except the sash. We expect this large body of air will when once warmed to about 70°,—we now think the temperature should never much exceed 70° when bees are confined to a room — keep warm all night, especially if the glass is also protected at night by a curtain. The dimensions inside are now to be about 12x24 and 6 feet in hight. We think it advisable to have the room as low as it can be consistent with comfort, while working among the bees; for the same reason a flat ceiling over head is to be preferred, as the bees collect in the ridge, and the warm air rising makes it so hot as to be quite unhealthy for them, while they only struggle to regain the open air.

We are making preparations to put our bees in their winter quarters before cold and stormy weather, the hives are dry now, and the bees seem quite healthy.

Sixty eight colonies now, counting nuclei and all. One of those under the glass was found Queenless, caused probably by bees from other hives getting in by mistake when first put in. We united it with a nucleus, but their artificial abode yet so nearly approximates nature that we found the Queen in the midst of a ball of bees on the bottom board an hour after. She was promptly caged and now all seems well.

Nov. 3rd—Our bees are all housed for the winter, except a few weak ones that are to be domiciled in the green house. We would like to say they are all *nicely* housed, and we suppose our readers of course presume we did everything *just right.* To be frank, we only succeeded in getting through with the first 20 colonies when we set out to cut winter passages. Remodeling and enlarging the Green House has taken much of our time and—we concluded to let the rest go.

Why do we house them so early? Well, principally because the hives are dry and nice to handle; they seem very quiet, and have had their stores all nicely sealed for some time, and we thought it might be well to get them in before damp and stormy weather.

We have left on their quilts just as they were in summer and carried in bottom-boards and all, that we might disturb them as little as possible. Quinby advises that they be housed so quietly that they will know nothing about it. This we started out to do, but some of the hybrids found out more of what was going on than was really comfortable to one's feelings. The weak ones—and a large proportion really are *weak again* in spite of us—were docile enough it is true, but the heavy colonies of hybrids are rather averse to being disturbed. We know of no reason why *our* colonies should dwindle down as they do in the fall unless 'tis the cider mill, and we shall in the future have no more of this trouble we really believe. P. G.'s cloth curtains having proved a perfect remedy, yet great numbers were lost before they were used.

Oct. 6th—Although we have had a couple of remarkably warm days for Nov., our bees seem as quiet as one could wish, and by the way there is something unusual about them this fall in this respect. For instance: in building our Green House, two hives that stood handy, were used as "saw horses" to hold lumber, and as the sawing did not seem to disturb them, we even ventured to nail inch pine boards together *on top of these hives.* Incredible as it may seem, not a bee showed his "phiz;" to assure ourselves they were alive we raised the quilt and there they were, full blood Italians, grandchildren of our Imported Queen, and they were so densely packed that it almost seemed they would never get "untangled." After we had looked at them a moment in amazement, they began to rouse up with a behaviour that seemed to say, "what in the 'dickens' *do* you want of us this cool weather?"

A man that we have in our employ to "dig" (*we* can dig some alone, but when a "very big hole" is required we—that is—some how "'tother man" seems to be the most profitable) insists that our bees this fall really are a different kind, or they would never stand hammering on the hives in that way. How is it kind readers? is it the new importation, or has the sealed stores given them in Aug. and Sept., something to do with it? or is it both? Now while we were putting them in the house we probably calculated on this sublime indifference to this world's "bumps" and as it was almost dark—by the way do you know that it sometimes "gets dark" at provokingly inopportune times?—but we finished putting them in. As we were obliged to hold the entrance against us in setting them on the upper shelves, two or three of the hybrid colonies which were very full of bees and correspondingly "sassy," "biled out." It was too dark to see them plainly, but from the neighborhood of our waist there came a peculiar hissing sound, familiar to most of our readers, plainly indicating that *they* were anything but "dormant." Were we stung? Well really, as we went on with our work after brushing them off with a broom, we can hardly remember. Had it been daylight we should have saved the bees, but as it was we regretted far more, being obliged to kill the over zealous little fellows, than any injury they did us. We really do hope something will turn up to do away with "lugging" hives about at any season of the year. An examination of the Bee House since shows all quiet again. In fact it is hard to believe the room contains any living thing at all, when we enter on tip toe in the night time. This really seems like the year we first built the house. We lost none then.

The bees in the Green House now work beautifully on the meal, and one hive shows perhaps 50 square inches of sealed brood. After they have hatched out perfect bees we are going to sail our hat higher than it ever went before. If our readers should hear any thing unusual about Nov. 15th or 20th, they can conclude it was probably Novice giving three cheers for the successful solution of PROBLEM NO. NINETEEN.

A few bees got out at the door to-day when we went in for something; supposing these lost, we thought no more about it, but toward night seeing some bees about the door we opened it and let them in, and sure enough they flew in immediately to their respective hives.

Just think of it: It may be that we after all shall be under no necessity of having the sash removable, but shall only be obliged to open the door to our Green House whenever the weather will admit of their going abroad; still further, is it positively among the impossibilities that a small door may be so arranged that it can be left open at all seasons allowing the bees to work abroad or in doors according to their own "sweet will," for we really do dislike making prisoners of any animated thing, and bees most of all? We really feel that we are but "groping in the dark" in this business, yet as light is daily coming we will try to be content. Help would be quite acceptable, and we should welcome with pleasure the result of any similar experiments.

We found our hybrid Queen safely introduced to-day and had we not already spun out such a very long yarn we would tell about the remarkably *large* white eggs she lays. As it is, we'll say nothing about them now, but they really are remarkably large. By the way her bees,—nearly black hybrids—have an "astonishingly" cool way of giving a body decidedly pungent stings for no offense in the world except "jest trying to get a peep" at the aforesaid large white eggs.

Don't you believe we're tired? Besides writing all this gossip, we have been at work since daylight on the extension to the Green House; nailing boards over our head until our neck ached, working all doubled up in cramped places with insufficient "understanding," scratching ones' head when it is already full of saw-dust and dirt, in the vain attempt to decide how a Green House *should* be made for bees, when there's not a mortal on the face of the earth who has ever heard of such a thing before, (nor since for that matter). Can't we say good night now? Blue Eyes was asleep hours ago dreaming perhaps that it's "too bad" that "Papa *so* busy" he couldn't even help her up when she "fa'd down" over his "naughty boards" when she went out to see him work.

Nov. 7th—We opened the door again this morning and very soon the bees deserted the glass and rushed out and in at a great rate. After an hour's exercise in the open air—it is as warm as June—they go back contented, and work on the meal with more avidity than any day before, this fall. They have also eaten or carried away nearly a whole sweet potato—see Heads of Grain—but we were *so busy* we did not even see how they did it. In our work of enlarging the structure we uncovered the whole room in the afternoon, and finally had the hives so covered with boards, and timber, carpenter's tools, spades shovels etc., that it was a wonder indeed that a bee could ever identify any trace of their usual home, yet to our astonishment they labored as happily as if nothing was amiss; and even repelled some black robbers vigorously toward night that proposed to share their "meal and potatoes."

Nov. 12th—As sure as you are alive nice young Italians are hatching out! Wings are as good, and all else apparently as perfect as bees reared entirely under the broad canopy of heaven.

If it were not for the bees that still die daily from trying to get out, we fear we should be about as happy as we ever expect to be in this world. "Cause why?" When fruit trees are in bloom next spring, we could then have each individual hive *ready to swarm* if we chose, and then each would *perhaps* give 500 lbs. or more, and 68 times 500 is——but they *do* die as yet though not quite as fast as the new ones hatch, so we will keep hopeful.

Nov. 23th—We have made many experiments since our last, have torn down and built up, moved the sash, changed its angle of obliquity etc. etc., but with no good result toward keeping the bees from clustering on it worth mention, until we raised the sash so nearly level that the south side is only one foot lower than the north. Mr. Burch was certainly right, yet we could see no reason for it until we had made the experiment; it seems that bees like all winged insects and birds, in their flights for exercise, swing around on circles nearly level with the horizon. They may ascend or descend, spirally, but find it very inconvenient to shape their circular flights so as to avoid striking a glass placed obliquely; whereas, with the sash level or nearly so, they describe circles or figure 8s, with no danger of touching any thing unless it be the sash bars which they naturally avoid without effort. Seeing nothing but the blank sky overhead, instead of familiar objects may also have something to do with the matter. After changing the sash as mentioned, we put a fire in the stove, which was incorporated with the apartment having no glass, and soon raised the temperature to 80°; this caused the bees to pour out of their hives as they do when a warm spell occurs sometimes after a storm; after an hour's circling about under the sash, which was apparently quite satisfactory, they all returned to their hives or to their labors on the meal and syrup, except perhaps 2 or 3 dozen. If we can reduce the daily mortality to 8 or 10 bees per hive, we are all right, for they are even now, rearing brood much faster. The pet nucleus had their brood all killed during a frosty night while the house was torn up, and after two or three repetitions of the same, gave up. We thought we could easily start them again when all was made tight, but here we failed. Gather syrup or meal any more they would not, even while the other three were making the air jubilant with their labors. Finally we put them all in our Lamp Nursery, and kept their combs at a temperature of from 60 to 70° for over a week, but all in vain; they crawled over the combs idly, played a little in the sunshine, their Queen got small and insignificant, and they evidently, like some mortals, concluded they had "tried and tried, but it wasn't any use," and they wouldn't try any more. On the 22nd we turned up the lamp until their hive was warmed to between 80 and 90°, and at the same time gave them food drizzled on top of the combs, and now, the Queen has commenced laying, and they clustered on a definite place. One point right here: keeping the hive at this temperature *does not* induce the bees to fly out in a cold atmosphere and get lost; if they are taken out of the hive they fly back where it is warm with alacrity.

Did the "manure heaps" *really* have any agency in reducing the number of our bees last spring after all?

On page 105 where friend Horner speaks of carrying bees in-doors for examination, we needlessly exposed our ignorance, simply, because we had never given the plan he mentions a proper trial. 'Tis a very simple matter if the room is not *too warm*. We beg pardon friend H., and thank you for your criticism. We hope there will soon be no need of losing bees in the spring just because of the weather.

Nov. 24th—Heighho! Another problem. *Our* sash won't shed rain with only one foot "fall" in six. At present we see no other way but to make another sash over this, on a proper incline to get the most of the sun's rays and to shed rain; this will also give an air space to keep out frost. The disadvantage is that it takes more money, and we often have a feeling of late that the whole structure is a piece of blundering in the dark (mud too just now, *under the sash*) and that perhaps when we get at what is wanted, it will all have to be thrown away as so much rubbish. Such is Bee Culture in unexplored directions.

Nov 25th—Temperature in open air 10, greenhouse 38, in lamp nursery 90°. Queen has laid a nice cluster of eggs, but they haven't a particle of pollen. As the nursery is roomy, we placed a small heap of meal at one side of the combs, near the entrance which is large enough to give considerable light. Even at a temperature of 100, these bees do not fly out unless the atmosphere of the room is above 50°.

Nov 26th,—The weather has moderated so much that we found the thermometer in the nursery indicating 110; the bees with the queen had deserted the combs and clustered on the quilt. She had filled quite a space with eggs but none have hatched as yet. Some of them had flown out, and again showed symptoms of dysentery, as they did when the room was warmed by the sun to 120. Does not this seem to indicate that a temperature of more than 100° is prejudicial to bees, and that consequently their hives need shading during the hot summer months?

Gleanings in Bee Culture,

Published Monthly,

A. I. ROOT & CO.,
EDITORS AND PROPRIETORS

MEDINA, OHIO.

Terms: 75c. Per Annum.
[*Including Postage.*]
For Club Rates see Last Page.

MEDINA, DEC. 1, 1874.

A. B. J. at hand Nov. 5th, *Magazine* the 11th, and *World* on the 26th.

WE are using better paper to print our GLEANINGS on. Do you notice it?

WE are happy to say our neighbor Rice, who advertises Catnip seed, is both prompt and reliable.

IN answer to an inquiry on another page, we will say we cannot learn that the N. A. B. Society considered the matter of a Standard frame or hive at all.

REMEMBER all new subscriptions sent in before Jan. 1st, get Nov. and Dec. also, and that all old subscribers *renewing* before that time, get a present equivalent in value.

IN getting up clubs for any purpose, subscriptions for Vol's 1, or 2, will count the same as for Vol. 3; accordingly we send Vol's 1, 2, and 3 for $2.00, and include Lithograph besides.

THE Lithograph we are prepared to mail promptly, but "that present," we fear we shall be unable to get fast enough to mail just the minute a renewal is rec'd. We'll *try hard*, however, to be prompt with this also.

MEDLEY will be ready to mail about Jan. 1st. Price will be $1.00—to those who have sent in their Photo's, only 75c. Or it will be mailed to any one sending us 5 subscribers, to those having sent in their pictures, 4 only.

WE don't know that we have any great promises to make as to what GLEANINGS will be for 1875; we might disappoint you. It will probably be about what you might expect judging from an examination of our two first volumes.

TELL us about your troubles as well as your successes. Had we not mentioned the difficulties we have had with division boards, we probably should never have brought out the excellent device described on page 113 by friend Moore.

WE are under obligations to M. H. Tweed, for copies of the *Pittsburgh Commercial* containing reports of the N. A. B. Society. The report is necessarily much abbreviated but our readers who desire can probably get it in full in the *B. K. M.*, as Mr. King took a prominent part in most of the discussions.

THE *Bee World* for Oct., which came to hand just after our Nov. No. was issued, is one of rare practical value. Perhaps no single No. of any of our Journals has given as many valuable letters bearing directly on the "frame" question, as this. Will our Southern friends accept our thanks for the information we were thus enabled to "glean" from so many practical bee-keepers.

CAN we be so very positive after all, that large hives give any great advantage? Doolittle's yield was most extraordinary under the circumstances, and yet his hive (nine Gallup frames) is the smallest we recollect ever having seen recommended,—but little more than ¾ the capacity of a one story Langstroth. Will he describe his honey boxes and tell us whether they are put only on *top* of the frames.

WE presume many will read the California report wlth interest. We would be very glad to hear what you are doing, friend W. Could we have a climate permitting queen rearing every month in the year, it seems to us we could not only supply the world with dollar queens, but could get six tons of honey from 48 colonies, even with our average seasons, with all ease. We can't well pull up stakes and go to California, but if the greenhouse will enable us to push brood-rearing regardless of weather, it will be the next best thing.

Is it possible that *any one* who will take, and read the *American Agriculturist* can fail to be benefitted to the amount of $1.60? As a vehicle of civilization, and for keeping up with the industries of the present time, whether one be farmer, mechanic, merchant or anything else, we do not see how they can fail to feel an interest in its pages. Every page of it, even the advertising columns if read, will have a tendency to improve your homes, improve your morals, and just as surely, augment the contents of your pocket books. Sent with GLEANINGS postpaid for $2.10

SOME REMARKS IN REGARD TO OUT-DOOR WINTERING.

BY CHAS. F. MUTH.

AS winter is approaching I suppose almost every one of us has been taking care to put his bees in proper shape for wintering, i. e.. has seen the Queen in every colony, given each hive the necessary supply of winter stores, cut winter passages through the combs and arranged them so that the combs with brood, if any such be found. hang in the middle, and honey combs next to them etc. I have given my bees the full size of the lower story of a Langstroth hive, with ten frames, honey in each one, without regard to the strength of the swarm or to the honey being capped or uncapped. Why should the honey sour in the cells, when it does not sour in an open vessel? But I have a straw mat on top of the whole and an air passage above the mat. Let us give our bees a warm covering in winter, but at the same time I prefer upward ventilation, whether this is effected by the aid of a straw mat or something else makes no difference. I know there is much said in favor of giving our bees just as many frames as the colony can cover, yet I have failed to see the difference in spring, in the bees of those of my friends who put them up in that manner, and my own bees. To test this matter I have left a medium sized swarm in a one story hive containing 20 Langstroth frames. every frame filled or partly filled with honey. I don't believe that anybody's bees wintered better last winter than my own, and those of my neighbor's who put them up similar to my own. Friend Curry's bees became strong in spring perhaps faster than any other bees in the neighborhood, caused by a splendid natural protection. Their apiary being situated in a hollow, opening to the south and protected from cold winds almost completely. I wish you would give our way of wintering a fair test, brother Novice. It might be the means of saving you and others a good deal of labor and disappointment. I should not hesitate to winter bees in Minnesota or Wisconsin, on their summer stands and protected as stated above with the same confidence of success.

Cincinnati, O. Oct. 25th, 1874.

Thanks for your very excellent hints friend M. In regard to honey souring in the cells, our experiments have given us some light. The pet nucles, as we have called it, when first put in the greenhouse, gathered a large quantity of thick syrup—much more than the cluster could cover, and after having cool nights, they began to have a peculiar disagreeable smell. We supposed this was caused by the moisture from so small a cluster, mixing with the honey, for in fact right about the cluster was visible a peculiar damp kind of mold. This all disappeared after we kept them up to 60 or 70°, by means of the lamp nursery. Had there been bees enough to keep the whole hive warm, this we think would not have been the case, for other colonies near "smelled" all right. We never hesitate to "poke" our nose into any thing, even bee hives, if we think any thing is to *gleaned* thereby. Perhaps a *good large cluster* of bees would get along well on unsealed stores, but we feel sure weak ones will not. To digress a little, we last month mentioned symptoms of dysentery in the greenhouse; this has all ceased since we enlarged it enough to prevent a temperature of 100° or over occurring. In Feb. 1869 we had about 40 colonies in our cellar; in order to give the strong colonies enough ventilation to keep them quiet, we removed honey boards and cap entirely. We had perhaps ten days of weather almost as warm as summer, and opening the door and windows nights, seemed only to make them warmer. In spite of all we could do, all but eleven died of dysentery. Now the smell we noticed in the greenhouse when the thermometer stood at 120°, was precisely the old familiar one emitted by these diseased colonies. Many of them had unsealed stores. Could they have had a good fly—we put them out just after the warm spell was *all over*—they might have rallied. All had natural stores. Is it not possible that getting *too warm* has as much to do with the disease as getting too cold? As bees never get too warm when wintered out of doors, we certainly secure one condition by your plan, friend M. The testimony in favor of straw hives and straw mats is certainly too strong to be passed over unheeded. But do you believe friend M. you could thus winter a colony whose stores were half from the cider mills, or some equally unhealthy diet? We too have often had serious doubts of the utility of division boards for wintering, but are at present hardly prepared to decide them useless. Very many things that we "fuss" with are perhaps useless, and we know of no point needing the benefit of clear cool judgment more than this, viz: to determine what may be safely dropped and what may not. We are testing a straw mat, and have three colonies wintering out doors.

HONEY COLUMN.

I HAVE two barrels of white clover and basswood honey and about 400 lbs. of Aug. and Sept. honey, mostly golden rod. that I could sell. It is all candied.

A. BUES, Forest, O. Oct. 26th, 1874.

If the Semi-weekly Tribune (N. Y.) of Oct. 27th from which we clip the two following items, has been correctly informed, it seems friend Grimm has quite a formidable rival in the honey business, in the East, as well as J. S. Harbison of San Diego, California, who is said to have produced *seventy five tons* this season. We are making an effort to get at the real facts of the case from the gentlemen themselves. The second item seems to be a revival of Problem 17, as given on page 80, Vol. 1.

We read that John E. Hetherington, Cherry Valley, N. Y., "shipped one day last week a car load of 10 tons of choice white honey. He had previously shipped three tons, besides two tons of strained honey. His crop this season will hardly fall short of 30 tons."

Some of our apiarians are talking of a wagon with frames for a large number of hives, that can be moved about from one location to another. The benefits claimed are to take advantage, first, of the maple and willow blooms; next come back to orchards and white clover; then off to the forests for the basswood and other flowers: then for the blossoms of the tulip tree, and finally back to the fields of buckwheat and flowers of Autumn. This plan has been pursued in a small way for some years.

Reports Encouraging.

I HAD 10 colonies of bees at Port Sanilac, the past season, from which I got over 2000 lbs. of honey. I don't think that very bad for a new beginner. Ten colonies were all the bees I had, but the honey harvest and yield in Sanilac Co. this season, was the best I ever knew.

Wm. SPEDDING, Rockwood, Mich. Nov. 20th, 1874.

Bees in our locality have done splendidly since the spring troubles. Box hives in the neighborhood have in some instances yielded over 100 lbs. comb honey after having been robbed in the usual way last spring. I helped transfer several such myself. Our people are becoming interested on the subject. I have increased mine to over 40, having bought some.

W. F. LEWIS, Baldwin, Miss.

And do you too have "Spring troubles?" Please tell us about it.

DEAR NOVICE:—I wonder if any one of your subscribers takes care of his bees as far from his work as I do. It is 68 miles from where I sit all day long writing letters, to where my bees are, and I have taken all the care of them myself, increasing from 8 last spring to 22 ready to put in cellar and have taken 390 lbs. of very nice extracted honey. Spent about 15 days with them. I have promised my wife $2.00 each, for all the hives she winters. C. C. MILLER, Chicago, Ill.

A tip top idea Friend M. When we get hold of something we can't manage ourselves, whether it be intemperance, cider mills, or wintering bees, just put the whole matter into the women's hands and it will generally be all right.

In August I visited several bee-keepers in Onondaga Co., Mr. Root, Mr. Hosford and Lloyd of Otisco Valley, Mr. Doolittle of Borodino, and others. Mr. Root keeps about 50 swarms, says he has sold $3000 worth of honey in four years; has known only one year in his experience in which bees did not pay well. Mr. Hosford works bees on shares for other bee-keepers mostly, and has raised this season about 4000 lbs. box honey. Mr. Lloyd commenced the season with 21 swarms, increased to 44, "natural swarming" and got 2500 lbs. box honey; he saves bees in the spring by closing the hives cold and windy days. Mr. Doolittle's report you have. I will only add I had the privilege of seeing that lot of "nine day's" honey all in one pile and it was a splendid sight. Mr. D. also showed us his apiary, the $1.00 Queen, her progeny etc. etc., and I think she is just as good a Queen as one I bought of Mr. Langstroth for $20.00.

Taken altogether, we had a very pleasant and profitable visit and left satisfied that Onondaga Co., is *the* place for *box* honey, and that *Basswood* is the secret.

Enclosed find Photo of myself and wife; it takes two to make *one* bee-keeper at our house. I expect if reports are true you will see the "better half" first, but I will not feel badly.

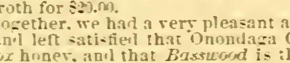
G. T. WHEELER, Mexico, N. Y. Nov. 26th, 1874.

IMPLEMENTS, DEVICES AND SUGGESTIONS

A DEVICE FOR CUTTING WINTER PASSAGES IN THE COMBS.

IT is simply a tin tube 6 inches long and 1 inch in diameter, shaped thus: This pushed in the comb at the same time turning gently back and forth cuts comb nicely. The tube is easily cleared by means of an awl thrust across the slits A.

A. C. HOOKER, Middlebury, Vt. Nov. 16th, 1874.



We have tried the device, and it does the work admirably. By simply thrusting the two points through the comb and then turning the tube $\frac{1}{4}$ of a revolution, a smooth round hole is made much quicker than the sharpest pen knife will do it. As he is the inventor, we propose to make them just right and offer them for sale; we will give him an advertisement gratis.

HOW TO SECURE STRAIT COMBS EVERY TIME.

Place the frames rightly and fill the hive to double its capacity (according to ordinary ideas) with bees or which is equivalent, contract the hive to half its capacity, or so much that in hot weather, some bees will hang out the first night. In a few days, insert frames between, to give room. The philosophy is, the bees being cramped for room to build combs, start them rightly on all the frames at once and then, those started, when separated act as guides for the rest of the frames introduced between. Try it, fellow Novices. H. HUDSON, Douglas, Mich.

From what experience we have had, we should judge the above to be correct. Where the quantity of bees is limited, this result can better be attained with short frames like the Gallup or Standard. The principle is essentially the one friend Dean works on; see page 91 Aug. No.

I gave my bees a little rye flour yesterday, and they are working on it the same as in spring. Will it do any harm or good? Would you let them have what they will carry into their hives? Please answer by return mail, and you will very much oblige.

S. F. NEWMAN, Norwalk, O. Nov. 10th, 1874.

Although we have had no experience in the matter, we should say give them all they will take any day in the year, by all means. Should they not use it now, we feel sure it will be just what is wanted in the spring. We had been thinking our green house furnished the only conditions under which meal could be fed in the fall.

FRIEND NOVICE:—The Nov. No. of GLEANINGS at hand. You seem to be at a loss for a substitute for winter pollen. Suppose you try "Sweet Potatoes" nicely baked, and put within or near the hive. I have done so successfully. During warm weather I keep a tumbler filled with water, and inverted in a saucer, standing at the entrance. A bit of soft cotton cloth twisted and coiled in the saucer leading to the entrance furnishes water at all times. Have had two Queens in one hive nearly all summer—one wingless. Have been successful so far. Have the Italians. For pasturage have fruit blossoms and linn, the latter in abundance, also clover, limited, some buckwheat, and a few wild flowers. Success to GLEANINGS, always on time. P. T. ROLEUM, Emlenton, Pa. Nov. 3rd, '74.

After receiving the above, we imagined we had succeeded also with sweet potato, but now are obliged to come to the humiliating conclusion that *the mice ate it*, for we only found it gone, and did not see the bees at work at it. Since trapping the mice it remains all untouched. If used as pollen we think it must be packed on their legs; did you see them do this friend "Roleum," or did they only tear it to pieces for its saccharine juices? We shall have to learn caution in stating the results of our experiments.

I have an ice house with a front room 5 by 10 feet with thick walls; would it do to put bees in it to winter. If all is well, I want a Queen as early as it will do to introduce her in the spring. Shall I send you the dollar now, or wait?

L. M. RAUB, Bolivar, N. Y. Oct. 26th, 1874.

We do not see why the room will not answer an excellent purpose if you can keep it between 40 and 45°. It will also have the advantage of enabling you with little trouble, to keep it cool enough during protracted warm spells, before it is advisable to put the bees out.

We would prefer that no order be sent us for Queens until we, through GLEANINGS, give notice that we, or our neighbors are ready to ship them. This will not probably be before June, unless the greenhouse *should* amount to something in that direction. If it does, you will be *pretty sure* to know all about it as it progresses.

Heads of Grain,

FROM DIFFERENT FIELDS.

FRIEND NOVICE:—Owing to the unfavorable and unprecedented dry summer, we are not able to give a very flattering report of our Apiary. We began the honey season with 31 very weak hives and extracted 3265 lbs. of very nice honey, nearly all Linden. One hive gathered 165 lbs. in ten days and carried it nearly three miles. We have increased to 75 colonies, mostly in good condition. Some are weak but all strong enough to winter. We wintered 35 colonies last winter several of which were nuclei, without loss, till they got the swarming out fever, which was confined to the hybrids: the swarming out only occurred when they could not get natural pollen. Hence the remedy is not to set out the weak stocks until they can get natural pollen, provided they can be kept in a healthy condition.

The Rape, 17 lbs., was sown at different times in June, and came up but was a total failure as I suppose every thing else would have been this dry summer.

E. C LARCH, Ashland, Mo. Nov. 3rd, 1874.

It had not occurred to us before, that the swarming out in spring was particularly caused by lack of pollen, but from what we now call to mind, we have no doubt that it is one of the causes if not *the* cause.

Our Green House is enabling us to study the pollen question as we have never been able to, heretofore. As for swarming out in there, bless you! wouldn't that be a joke for certain—on the bees. So many reports have come in in regard to Linden honey being brought long distances, that we fear we shall have to admit they do at times go 2 or 3 miles profitably. The structure of these blossoms enables bees to load very quickly, during a heavy yield.

We are sorry to say that but few flattering reports of Rape culture in this country have yet been rec'd.

DEAR FRIEND NOVICE:—We call you friend, but seems to me I hear you say, who are *you?* Oh! I'm the chap that used to get the old American Bee Journal from the Post Office, tear off the wrapper, hunt up Novice's article and devour it, yes fairly eat it, before I'd go a step farther, and years before I knew he had a Root to his name. Finally he got *stuck up* and started a Bee Journal "his self," and we looked in vain for the old familiar name, till we couldn't stand it longer and came pattering after GLEANINGS and the Photo, with ye requisite $1.00. Lithograph received all O K, as also back No's of Vol. 1, and we have read 'em all too. Can't get along after this without GLEANINGS to complete the list for we take all the Bee Journals. Now about flying bees in a hot bed. Am going to make one for two or three stands, how do you, or would you ventilate it? or does it need no ventilation?

Had one strong stock last spring, and one light one, increased by purchase and artificial stocks, all light, to 7 strong stocks, plenty of honey for winter, and have taken 330 lbs. honey, 116½ lbs. from one, and also 8 frames of brood and honey from same one. How will that contrast with Mr. Adam Grimm's report of 1158 stocks and 25919 lbs. honey? Oh! well, guess you'll have to put us away down in the "wee" corner. I send herewith a Photo. of self for your medley, if it's not too homely. Your friend W. M. KELLOGG.

Oneida, Ill. Nov. 5th, 1874.

P. S.—A kiss for "Blue Eyes."

Some provision must be made for ventilation, or rather for reducing the temperature, in warm weather at least. This was our greatest blunder for we made the glass the full size of the room at first, and found it insufferably warm inside while icicles were hanging to the eaves on the outside. This to be sure was remedied by a wire cloth door, but to prevent its being too cold when the sun had gone down, this door must be opened and closed twice a day or oftener, and even then we lose this volume of heated air that is so much needed in the night time. Reasoning from this we presumed making the buiding much larger and having the glass only cover part of it would give a more even temperature and also economize the surplus heat furnished during the day time.

Our room now is something over 12x24 feet, and all except the glass is protected by 18 inches of dry earth, all carefully roofed over, to guard against frost in winter. It seems to answer as we had anticipated, but we cannot report fully until colder weather.

In regard to Grimm's report: our Journals have for years been teeming with reports of great amounts of honey obtained from occasionally a single hive, or the product of a single season. Certain parts of York State have this season produced great results, yet for three seasons previous they have not reported at all, or at least but little worth mentioning. In order to get at the real profits of bee-keeping should we not have the average amount per hive, and if we are to make an estimate of what can be depended on in the future, shall we not also have reports *every* season? Adam Grimm has we believe always reported, and has given us the benefit of the results of his work poor seasons as well as good ones.

Also, if it be possible to secure $50.00 each from 3 or 4 hives, or even half a dozen, it will not pay us to spend our whole time on so few. The bee-keeper who can so manage 50 colonies as to secure $1000 from them per season, *on an average* is in our opinion far ahead of the one who gets $50.00 as the product of one hive in a dozen, once in 3 or 4 years. Could our readers make as good a result *on an average*, as the lady who writes the following—really, we don't know what would happen, only that we should feel quite happy to see so many others happy. The 24 colonies mentioned were wintered entirely on coffee sugar. See page 21, Feb. No.

DEAR BEE KEEPING FRIENDS:—I commenced my letter on a postal card but have laid it by, as not half large enough to write what I want to. I wrote you a letter last winter which was so full of "palaver" (as the old lady called it) that I was heartily ashamed of it afterwards, especially when the returning postal card thanked me for my good opinions, but really I was sincere and I believe most any one else would have been just as thankful as I was. I should say we, husband and myself, for last year we had a very unsuccessful year and it was our first year with bees. Just then came such a bundle of good things (the GLEANINGS) that it gave me a great deal of comfort, hope, and I trust profit. Comfort, because they told us we had been doing just about the best thing that could be done considering the poor year: hope for the future, and profit through the experience of others.

This year has been a very poor one for bees, (judging from our neighbor's bees), for I do not know of a single colony kept on the old system, in box hives with no care, that have given their owner any surplus, or swarms that have built their hives full of combs.

We feel well repaid for the care we have given our bees: each of the 24 colonies with which we started in the spring has given us about $25.00. Husband says no stock on the farm has paid so well for their care and feed. We think it will pay well to raise catnip, we had a small bed of it which we set out in the spring; the bees swarmed on it for weeks. Buckwheat did well, Mr. McLay says it seldom fails in this vicinity. We sowed some three times, the first did not amount to much, dry weather and grasshoppers injured it badly, but it gave a little picking for bees. The two last sowings did well. I think husband sowed them from 3 to 4 weeks apart. We think we shall sow acres to catnip and mustard next spring. Of our Rocky Mountain plant only a few seeds came up, the bees do not swarm over it as they do catnip and buckwheat or else it was because the plants were more scattering.

Extracted honey retails here for 25c, and box honey for 30 and 35, we are satisfied that we got as much again honey by extracting as we would if we had made them store in boxes. We had three of our strongest with boxes on—got tired of their slow work—took them all out except from one hive which we made finish up those that were nearly full, and extracted the rest.

Our bees are mostly Italians, think they are much better than the common blacks. I have a few questions I would like to ask.

1. How do you manage to keep track of your hives that you have extracted? do you commence and go through the whole apiary at once? If you skip around, one so soon gets mixed up unless accurate account is kept, on paper.

We take each hive in regular order. Some may not be ready 'tis true but we look them over and see that they need nothing. In this way we are sure to see that all Queens are doing their duty etc., also we can readily compare one colony with another.

2. How did your hemp pay you? I noticed in GLEANINGS you thought of trying it this year. Would you advise raising it for bees.

We did not try the Hemp although Messrs. Shaw & Son did. Bees worked on it some in the morning but perhaps not more than on corn and some other pollen yielding plants. We do not think it would pay to raise it *exclusively* for bees.

3. Could you tell us the best method of harvesting a crop of mustard seed? and if the black mustard is better than white for honey, could the seed be sold to advantage do you think? Is the white ever sowed for bees?

We will try to collect information in regard to mustard before another season. See page 124 last month.

4. What sized honey jar sells best, one, two, or three lb.?

We now use Mason's 3 lb. Fruit Jars. We prefer them because consumers, having no use for jars made expressly for honey, wish us to take them back when emptied, and coming one at a time, they are too much trouble. The regular fruit jar can be sold with the honey, at the market price, and thus afford a small profit also.

5. Do you think bees would go back to their hives if put in a warm room with one south window, and allowed to take a fly in the winter time, if the hive were set against the window? if they would, would it not be a benefit to any colony troubled with dysentery?

If you could have a window that reached down to the floor, so that the entrance to the hive could be placed very near where they would fall when tired of flying against the glass, it would probably succeed. Perhaps a broad table placed tight against the window sill, that they might not get down on the floor, might answer. The room must not be too warm. We are inclined to think from 60 to 70° enough. They will buzz on the window a good deal the first day, but soon get used to it, and fly about the room safely.

Will you please describe golden rod and aster? how tall do they grow?

Both belong to large families, show many varieties and usually grow from 4 to 6 feet high. The Golden rod may be known by its solid masses of golden hued bloom, composed of many small blossoms. The Aster on the contrary bears flowers singly that are perhaps an inch or more in diameter, and somewhat resemble a Sun Flower on a small scale. Different varieties are found of each in different localities. To furnish honey profitably, like all other plants, there must be *acres* of them.

6. In using your surplus bees to raise Queens in top of hive will bees enough stay there? or is it necessary to shut them in?

Bees enough will usually stay if brood be moved up with them. Sometimes however, we have found it necessary to fasten them in for two or three days.

7. Some recommend turnips to be planted so as to blossom just after fruit blossoms. Should the turnips be set out in the spring early, for that purpose? I think the seed would not blossom so early, and turnips would not live in the ground if left in through the winter in this climate. I would think it quite a task to set out a very large bed of turnips, and unless of considerable size, it would not benefit bees.

We think you are right. Unless one had a job of raising turnip seed for the market, 'twould "cost more than it come to." If covered with light top dressing, they might stand the winter, but even this would be rather expensive. To derive any appreciable benefit, we really must have acres of the flowers.

8. We use the Peabody extractor. Don't see how an extractor could work better, but we have never seen any other.

The Peabody machine certainly does good work, but it runs hard and works slowly. With thick honey, it must be brought up to a high speed requiring a man's strength; when this speed is attained, it requires even *more* than a man's strength to stop it instantly as we readily do those machines in which only the light frame that holds the combs revolves. Your husband is doubtless strong (and patient?) or he would have complained of heavy Quinby combs ere this.

9. We also use the Quinby hive and like it *real* well, don't see that we could better it very much.

The Quinby frame *is* certainly a good one; perhaps the best, where *only* a man handles them.

10. We made a universal feeder for each hive, extracted all their honey, made good thick syrup and fed the bees for their winter stores. We have now 47 good colonies with plenty of good sugar syrup sealed in their combs; for winter feed we used about 20 lbs. sugar per colony, they seem to have plenty.

We like the feeder, only one has to learn how to use it. We got the strongest Indian Head Factory we could find but syrup of what we thought the right thickness would run through too fast, so we took a swab and rubbed a mixture over it, ½ beeswax and ½ rosin melted together, not all over it, but just enough to prevent the syrup from running through too fast.

Use canvas, or "duck," as it is sometimes called, and you can feed even clear water in it if you choose.

11. Husband made a tent which he thought very handy to finish extracting in, or rather to put over the hives while taking out combs. We did the extracting in the house, the back of the tent was fixed on two wheels, and when he wished to move it he only had to lift the front and move it like a wheelbarrow, we only needed to use it at the close of the last honey harvest. We could not have taken *all* their stores without it.

SARAH J. W. AXTELL, Roseville, Ill. Nov. 3rd, 1874.

We presume such a tent is an excellent idea, although we have never used one. In removing the honey preparatory to feeding syrup in the fall, robbers are so troublesome that 'twould be difficult to get along without some similar device. If you put your tent on *four* wheels, and place it on a track which runs between two rows of hives, you have friend Blakeslee's idea precisely. Thanks for your very practical and useful letter.

A. I. ROOT & CO.:—Why Novice! as sure as the world if what I find way down in the corner of cover of Nov. GLEANINGS is correct, all our dollar Queens are pure, and also the one sent me by H. Alley. After we had learned how to introduce Italian Queens successfully, (which we have done with more success late this fall than early last summer) we thought we would have one pure if we had to send all the way to

Italy for it, but we will stop now if we can only winter those we have; still our success in the past makes us feel hopeful.

Novice asks the question "cannot bees almost always gather pollen, when the weather is warm enough?" I answer yes, our two colonies containing our best Italian Queens, which we have been feeding to stimulate breeding, were gathering pollen yesterday and the day before, but I am afraid this is a bad omen, they have used up all their supply of pollen I fear, and have none on hand for winter. And now I shall propose a problem: Can bees be wintered successfully without any pollen? ILA MICHENER.

Low Banks, Ontario, Can. Nov. 9th, 1874.

We will call above PROBLEM 25. Who tells?

DEAR "NOVICE":—I suppose you must "mean me," in your remarks on pictures in the Nov. No., no matter which horn of the dilemma I take hold of; I therefore herewith send you my Photo. I also send you Mrs. Lane's because, 1st, they were both on the same card, and secondly, because she and I have run this institution including the little "buzz" all by ourselves, this season, and therefore I hope the pictures may prove equally acceptable.

Last spring we had 34 colonies, and we now have 72 "such as they are." We are such "old fogies" that we run the Apiary exclusively for box honey, and we have secured only 2409 lbs. Whether these results constitute a success or not "this deponent saith not."

D. P. LANE, Koshkonong, Wis. Nov. 7th, 1874.

The "Photo's" are coming in quite plentifully and 'tis amusing to see how differently our friends look many of them, from what we had judged by their letters. For instance: who would suppose from the light boyish tone of friend L's letters that he was so far on life's road as to show streaks of gray. May we all grow old as cheerfully.

Send along the Photo's of the "better halves" too, by all means, whenever they assist at bee-keeping or bee-losing either, for that matter, they are certainly entitled to join our throng.

A trifle over 64 lbs. of box honey per colony besides more than doubling the stock ought to be success sufficient to satisfy almost any one.

Several half barrels of Clover honey already crystalized. Do you know of any way to get it out without taking the barrel head out?

G. C. MILLER, Mt. Hanley, Nova Scotia. Nov. 2nd.

See page 60, May No.

MR. ROOT:—Please permit a humble "perusaler," of your paper to bid you God speed in your task of airing humbugs and swindles. And great may be your reward for taking right hold of mastiffs as well as little curs, is the prayer of one who appreciates "GLEANINGS" and despises humbuggers.

Yours truly, L. B. HOGUE, Loydsville, O.

FRIEND NOVICE:—Frank Langdon, of Kirkwood, N. Y., had one stock of Italians that filled two 50 lb. cases of small frames, and he made one stock from it. About the first of June I fixed up 4 stocks of hybrid bees for Roswell Bump, Binghampton, N. Y., they were in Langstroth hives, but many combs were built crooked. I told the boys to take off the sticks in two or three days, and I suppose they were never opened after the sticks were removed. They tell me one hive filled *twenty three* 6 lb. boxes, besides swarming once. That beats me.

As you seem to have had some trouble about division boards, I will tell you how I made some to winter two nuclei in one hive; take some lath such as we use to make small frames, ¼ inch thick by 1¼ wide, cut two pieces (ends) long enough to reach from the bottom of the hive up to the quilts, cut one piece (bottom) the length of the hive inside; and one piece (top) the length of the hive over the rabbet, and notch the lower edge so as to fit the rabbet; Now take some old woolen cloth hard twisted and close woven, nail all together with cigar box tacks and clinch and tack on to the frame, and you have a division board, that the bees will cluster up against, that will not warp or shrink and will give each the benefit of the heat from the other. J. P. MOORE.

Binghampton, N. Y. Nov. 3rd, 1874.

Thanks for the suggestion. We think such a division board might be made to "keep tight," and they would be light and neat to handle. Another thing, in using these for strong stocks they could not be gummed down so firmly as to be almost a fixture. We have never known bees to gnaw *woolen* cloth.

REPORT OF MICHIGAN APIARY FOR 1874.

Began with 48 stocks in good condition. Have increased to 55 and taken *not less* than 8500 lbs. of surplus, only 1000 of which was comb honey. I have, as you well know, started a "Honey House" on a small scale for the purpose of selling my own crop, but have met with such good success, that I shall handle about 20.000 lbs. before next season. Have already bought the crop of several Michigan bee-keepers, but shall try in future to *raise* all the honey I can handle. Hope all bee-keepers will retail their own honey, thus creating a greater demand for it. Our home demand has increased fivefold since I started an Apiary here.

JAMES HEDDON, Dowagiac, Mich. Nov. 5th, 1874.

MR. ROOT, Dear Sir:—I will send you by to-morrow's mail, a Queen. I would like your opinion as to purity and value. I bought her (a dollar Queen) of a breeder well known to you and re commended by you. She may be pure but I would't *give* away such a Queen if I cared for my reputation. I had her in a strong colony about a week and as she didn't lay any I removed her to a nucleus. She laid a few eggs soon after that. I don't wish to spoil a stock by using her. You can do what you please with her. I presume she will be dead, but you can judge something about her, she is the smallest Queen I ever saw.

E. KIMPTON, Cedar Creek, N. Y. Nov. 6th, 1874.

The Queen came to hand alive and is certainly small, but our friend should remember that all Queens generally look small and insignificant in Nov., also that they usually lay but few if any eggs either in Oct. or Nov. Please remember also that selling Queens for $1.00 is pretty close business. and if occasionally one should prove poor it is no more than we might expect. When orders are crowding, we often ship a Queen as soon as she has laid her first dozen eggs, and consequently we have no means of knowing what they will prove to be. At the same time we hope none of our Queen rearers have been guilty of selling Queens from other than choice pure mothers, and from cells that were well supplied with royal jelly. The Queen in question was so tenacious of life that she lived several days in the green house after the bees with her had died. She might have lived longer had we not (regretfully) pinched her life away.

A. I. ROOT & CO., Sirs:—The Wormwood has been of great service to me this season, especially in those hives used for extracting. A little of the smoke blown among the combs drives nearly all the bees down into the lower story, then by the use of a brush made of White Cedar boughs tied together, the combs are ready for the extractor as soon as one could wish; the smoke does not seem to stupify or injure them in the least. One brush of Cedar boughs has lasted through the honey season. This has been a poor season for box honey but have had a good yield from a few hives on which the extractor was used. I do not know that any of your readers feel as I do about the reports of such large yields of box honey from J. P. Moore, Binghampton, N. Y., and others in his vicinity. I am very anxious to know what kind of hives are used and how managed to secure such results. Perhaps he is flooded with inquiries and I am waiting and hoping that all the particulars will come before the public without making him too much trouble. We cannot all go there to get the information but it might be worth many dollars to some of us, if we knew all the particulars, such as size of hives, size of brood chamber, comb frames, honey boxes. and way of access to boxes etc. A. C. HOOKER, Middlebury, Vt.

Friend Moore we think will be happy to assist in any way he can, but we fear 'tis not every one who can succeed as do he and Doolittle, even had they their locality.

DEAR NOVICE:—To-day I rec'd Gleanings; I find my letter in print, in which I wrote you so dolefully. I must give you the history of the season as a postscript to that letter. I send you an extract from my diary.

From the 5th to the 15th of June nearly every day it rains, and is cold. Bees are to be fed almost daily. But few of the hives are more than half full, say from five to six frames. I use frames one foot square. Not a single hive has one pound fresh honey except the feeding; eggs are laid sparingly and combs with larvæ are abandoned.

July 4th—The two straw hives have swarmed. Of 21, 10 hives have from 11 to 12 frames well stocked with brood, the rest contain from 7 to 9 frames, and 3 of them are Queenless. Not a hive that has one pound of honey, and all very poor in bees.

July 17th—Extracted 325 lbs. Linden honey.

July 21st—125. Item—the weather is mournfully dry, the Linden flowers gone, lasted only about 5 days.

July 26th—Extracted about 300 lbs., bees gathered from buckwheat and swamp flowers.

Aug. 1st—Extracted 152 lbs.

Aug. 5th—160 lbs. Bees in good condition and honey is brought in at a fair rate, pollen is gathered plentitifully. Whole combs are filled; the pollen is blue, like moistened powder.

Aug. 9th—Extracted nearly 300 lbs.

Aug. 25th—The weather is very fine and honey flows as usual although very dry. Buckwheat is nearly gone, all hives rear brood splendidly. Every hive builds a new comb.

Aug. 29th—Yesterday we had a slight rain, to-day all fly in full force and honey is brought in quite plentifully from swamp Snap-dragon; all the bees that come in are painted white from the Snap-dragon as I call it, but you call it wild Touch-me-not. To-day after mid-day extracted one wash boiler full.

Sept. 2nd—Extracted 243 lbs.; the combs are filled to overflowing, very much impeding the Queen's work. The weather is very dry. This night it rains.

Sept. 9th—Extracted about 350 lbs., the weather is the same—dry and hot. Thermometer 90° in the shade.

Sept. 10th—Ext'd 225 lbs.
Sept. 16th— " 125 "
Sept. 17th— " 123 " Fives hives Queenless.
Sept. 18th— " 55 "

I have brought up the number from 23 to 40. They have sealed buckwheat honey, say one half; I have fed to them one barrel sugar syrap, to complete winter stores. I have extracted nearly 3000 lbs. In 1871 by the large fire, a cedar swamp burned down, and this fall the swamp was one mass of flowers; The wild Touch-me-not and another I cannot name, with long cottony seed pods. The honey from the wild Touch-me-not was very thin; I set it apart in a large iron kettle containing 40 gallons. That honey is now one mass like butter and by far the sweetest, I kept it for spring feeding.

Instead of making the 4 feet hives I have altered my mind, and shall use my 12 frame hive. In the spring I shall provide for each hive two drone combs containing about 10 lbs. each, I have already a quantity on hand. These will be used in a flow of honey.

You will see that this postscript is a necessary compendium to the whole and teaches us all that he who takes care and continues to the end will be rewarded. During such a spring while we are feeding until the 15th of June, hives only half full in full swarming time, and the 4th of July not a single hive that had one pound of honey, then swarming time gone, it was time and reasonable to draw a long deep sigh; yet how glorious the reward. My bees had to build two new combs per week and all my old combs have their drone combs cut out down to the worker combs; all are repaired with worker cells. In my new combs my trouble was great, they built nearly all drone comb. Several hives however built all worker cells. I cut all the drone comb, two inches from the top bar, strait off and set them in the hives that built the worker combs; by means of this, I have now all frames with worker comb strait like a plank. Now what kind of a season have we had? was it a good one? My neighbors who stick to box hives say the season was bad; there were no swarms and bees did not work in boxes; their hives are heavy; so they are in the spring and fall every year.

Second postscript—My two straw hives were far ahead in the spring, but from July to Oct. they worked by far the slowest. One weighs 61 lbs., the other 44; the hives are small. I finish by saying, "a glorious hand shaking, and a thank you."

Joseph Duffeler, Wequiock, Wis. Nov. 3rd, 1874.

Stock browse on the Rocky Mountain bee plant, and I think it would make good fodder. I like the plan of a uniform standard size for frames. I have six sizes of frames in my apiary and find it *very inconvenient*, but as I am a learner and experimenting, I can bear it for a *while*. My bees have done well since summer set in, have extracted 200 lbs. and taken 40 lbs. comb, from 6 colonies and have increased from 7 weak colonies the 15th of May, to 17 now on hand. Some Italians, some Hybrids and some common. They are now laying in some, but what they get it from I do not know as we have had till yesterday a very warm and dry time.

Success to Gleanings, which I highly prize, and a good time for all bee raisers.

Abner J. Pope, Indianapolis, Ind. Sept. 24th, 1874

I wish to ask the following favor of you; which is that you try at least to have three young Queens fertilized in your hot house. I am even more positive than ever that it can be done, and that I *have* done it. In the first place see that you have no old bees in your nucleus, insert drone brood in it so that it will hatch a little before and just about the time the Queen hatches, in short, have no bees in the nucleus that have ever flown outside of the hot house. If you pay as much attention to this as you do to your other affairs and don't succeed, I will pay all the expense of the experiment. A. N. Draper.

Upper Alton, Ill. Nov. 6th, 1874.

Bless your heart friend Draper; to be sure we shall try the experiment. One colony has attempted to build Queen cells already, but as we had no drones, we were obliged to unite them. We are going to push them along and as soon as drones are capped over we will have some Queens. We have no fears but that they will rear Queens, but to get these Queens to lay worker eggs—that is the point. In regard to *pay;* all the pay we expect or want, is the 75c at the beginning of each year and we'll foot all expenses of experiments whether they are failures or successes. If the latter we shall be very glad to know that we have been useful.

I have just written to J. Carroll, Australia, that I would endeavor to send him a Queen with a *small* colony of bees next spring.

Fall pasturage has been good. Bees quit gathering only the other day, last week. Have plenty of drones and bees do not appear hostile to them even in hives having young Queens. Frank Benton.

Edgefield Junction, Tenn. Nov. 4th, 1874.

FRIEND NOVICE:—For the benefit of those readers of Gleanings who doubt the practicability of the Bidwell method ot wintering, or the veracity of Mr. B's statements, please say that he has already put his bees in hot beds for the winter. When the weather admits of it, the bees are allowed to fly abroad as in summer. We think it advisable to construct the hot beds so as to admit of ventilation without removing the glass.

One point more. While glass directly in front of the bees, as in your "*Glass House*" may not destroy its utility, still we must think it like a pane of glass in the side of a bee hive, more ornamental than useful—more convenient than desirable. Please try a simple shallow "hot-bed" with glass over the bees *only*, before pronouncing this method a failure.

Herbert A. Burch, South Haven, Mich. Nov. 9th

We are happy to say our glass house isn't a failure by any means, and if we conveyed the idea that the glass stood perpendicularly, it was our mistake. The sash is about 6½x13, and the lower edge is about 2½ feet from the ground and the upper or north, perhaps 6½; the whole room is 14x24 now, with only the amount of glass named, and yet it gets too warm on a very clear day. Instead of straw for the ground underneath, we prefer saw-dust. When the air is cold outside, the bees get against the glass but little. Our objection to a simple hot-bed is that, we can't go inside and whenever our bees are where we can't get at 'em, we are "in a peck of trouble."

CLUBBING LIST.

We will send GLEANINGS—

With The American Bee Journal	($2.00)	$2.25
" The Bee Keeper's Magazine	(1.25)	1.75
" The Bee World	(2.10)	2.60
" All three, The Bee Journals of America,		5.00
" American Agriculturist	($1.60)	$2.10
" Prairie Farmer	($2.15)	2.65
" Rural New Yorker	($2.50)	3.00
" Ohio Farmer	($2.15)	2.65
" National Agriculturist	(1.25)	1.75
" Scientific American	($3.15)	3.65

[*Above rates include all Postage.*]

Books for Bee-Keepers.

SENT postpaid on receipt of price.

Langstroth on the Hive and Honey Bee	$2.00
Quinby's Mysteries of Bee Keeping	1.50
Bee Keeper's Text Book, muslin,	.75
" " " " paper,	.40

Good Books.

These, though not specially designed for Bee-keepers, have a tendency to inculcate principles that ensure success in bee-keeping as well as almost all other rural pursuits.

The first on the list should be in the hands of every one who has planted grape vines to shade the hives, as we have advised.

Any of these books will be forwarded by mail, *post-paid*, on receipt of price.

Fuller's Grape Culturist	$1.50
Fuller's Small Fruit Culturist	1.50
Fuller's Strawberry Culturist	.20
Fuller's Forest Tree Culturist	1.50
Henderson's Gardening for Profit	1.50
Henderson's Practical Floriculture	1.50
Tim Bunker Papers	1.50
Ten Acres Enough	1.25
Roosevelt's Five Acres too Much	1.50
Art of Saw Filing (Holly)	75
Window Gardening	1.50
Leuchar's How to build Hot-Houses	1.50
Play and Profit in my Garden. Rev. E. P. Roe.	1.50
Waring's Draining for Profit and Health	1.50
Onion Culture	20

Averill Chemical Paint.

THE *ONLY* RELIABLE.
THE *MOST* BEAUTIFUL.
THE *MOST* ECONOMICAL.
THE *MOST* DURABLE.

Requires no oil thinner or drier,
Requires no waste of time in mixing,
Has stood *eight years' criticisms*
With *yearly increased popularity*
And *yearly increased* sales.

Is sold by the gallon only, in packages of from 1 to 40 gallons each, in Purest White and any Color or Tint desired.

Address, for sample card of colors and price list,

Averill Chemical Paint Co.,
Office and Factory 132 & 134 East River Street,
CLEVELAND, OHIO.

CLUB RATES on 175 Papers. Send for
CLUB List including AGENTS' RATES on
BOOKS by mail post-paid—400 in List—
BOOKS BINGHAMS' Agency, Sparta, Wis.
12t9p

ITALIAN BEES.

ITALIAN QUEENS bred from imported mothers—a month earlier than in the North. Purity and safe arrival guaranteed. Also full colonies of Italians in Langstroth hives for sale at $15.00 per colony.

Address DR. J. P. H. BROWN, Augusta, Ga.

THIRTEEN years experience in propagating Italian Bees. Queens will be bred direct from Imported Mothers and warranted pure and fertile. Send for my circular.
Wm. W. CARY,
1tf Colerain, Franklin Co., Mass.

GOOD Rye Straw Mats for $3.00 per dozen. Sample by mail 50 cts.
9t12p A. N. DRAPER, Upper Alton, Ill.

Names of responsible parties will be inserted in either of the following departments, at a uniform price of 10c. each insertion, or $1.00 per year.

$1.00 Queens.

Names inserted in this department the first time without charge.

Those whose names appear below, agree to furnish Italian Queens the coming season for $1.00 each, under the following conditions; No guarantee is to be assumed of purity, safe delivery or any thing of the kind, only that the Queen be reared from a choice, pure mother. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind that he who sends the best Queens, put up neatest and most securely, will probably receive the most orders. Special rates for warranted and tested Queens, furnished on application to any of the parties.

G. W. Dean, River Styx, Medina Co., Ohio.
W. J. Hosmer, Janesville, Minnesota.
Dr. J. P. H. Brown, Augusta, Georgia.
R. S. Becktell, New Buffalo, Mich.

Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

J. H Martin, Hartford, N. Y.
Geo. T. Wheeler, Mexico, N. Y.
H. Alley, Wenham, Mass.

In order to hasten the introduction of the ☞ STANDARD ☜

Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground	$2.00
Twenty frames for above 5¾ c. each	1.15
Sample Frame, by mail,	10
Quilt	40
Or all complete except painting, for	3.50
The same in a bundle including nails, hinges etc,	3.25
Extractor made expressly for Standard frames, (Comb frame 14¼ wide, by 10 deep.)	$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

A. I. ROOT & CO., Medina, Ohio.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc. etc.

Respectfully, A. I. Root & Co.

AMERICAN BEE JOURNAL.

Every Bee-Keeper should subscribe for this Monthly. It is the **oldest and best** scientific and practical Journal of Apiculture in the World. The most successful and experienced Apiarians in this country and Europe contribute to its pages. Terms, $2.00 a year in advance. **Send a Stamp for a Sample Copy.** Address, THOMAS G. NEWMAN,
Room 27, Tribune Building, Chicago

Clark & Holcomb,
HONEY LABEL
PRINTERS,
Medina, - - Ohio.

PRICES:

1000, Gummed and Cut,	$2.75
500, " " "	2.00
250, " " "	1.50

Sent post-paid on receipt of price.
Samples sent if desired. Address,

CLARK & HOLCOMB, Medina, O.

ADVERTISEMENTS.

Advertisements will be received at the rate of ten cents per line, Nonpariel space, each insertion, cash in advance; and we require that every Advertiser satisfies us of his responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them.

MUTH'S ADVERTISEMENT.

HONEY JARS.

One pound (square) Jars, per gross	$6.50
Two " " " "	8.50
Corks, "	.75
Tin Foil Caps, "	1.20
One and Two Pound Labels, per gross	.75
The same with address printed to order, per 1000,	5.00
1 qt. Self-Sealing Mason's Fruit Jars, per gross,..	19.00
Labels for above. " "	.65
The same with printed address, per 1000	4.25

I shall have on hand and ready for shipment from the 15th of June, a large lot of 1 and 2 pound square flint (white) glass honey jars. They are of the same style as my other jars, which are by this time well enough known.

I shall sell 1 lb. (white) flint Glass Jars per gross $9.00
2 " " " " " " 11.00

In lots of 10 gross or more, the same as the others, 50 cts. less per gross.

Langstroth's Bee Hives, Bee Veils, Uncapping Knives, &c., I offer at lowest possible prices.

Straw Mats,—to fit the top of Langstroth's hive—the manufacture of M. Nevin's, Cheviot, Hamilton Co., O., and well made, at $4.50 per doz.

UNCAPPING KNIVES.

As good as any.

Each	.50
Per doz	$4.50

For further particulars, Address.
1tf CHAS. F. MUTH, Cincinnati, O.

THE BEE WORLD.

OUR Bee Journal of the Southern States. Issued monthly at $2.00 per year. Sample copies free.
Address A. F. MOON & Co. Rome, Georgia.

BASSWOOD TREES

One foot and under, per hundred	$2.00
From one to two feet	.500
" two " six "	8.00
" six " ten "	15.00
" ten " fifteen	30.00

The one foot and under, sent by mail for 75c per hundred, extra. General nursery stock, such as Fruits and Grape vines of all kinds, Apples and Cherries. Evergreens, Osage Orange plants etc., for hedges, specialties. Maple trees also at low figures.
11t12p J. L. GREEN, Granger, Medina Co., O.

ILLUSTRATED JOURNAL

A magnificently Illustrated Monthly, with **Chromo** $2.50 a year. Send **10 cts.** for sample copy, or **30 cts.** for sample Chromo, terms to agents, etc. **Canvassers Wanted,** in every town, county & State. Address THOMAS G. NEWMAN, Room 27 Tribune Building, Chicago.

The Fruit Recorder & Cottage Gardener

3 MONTHS FREE.

will be sent FREE for 3 month to all who will pay postage at office of delivery. We do not ask any one to subscribe for our paper until they know what they are to get. It speaks for itself. Price only $1 per year. The **Small Fruit Instructor,** is a work of 64 pp. that tells in simple language just how to grow fruits in abundance for home use or market. Price 25 cts. post-paid. **A. M. PURDY, Rochester, N. Y.**

Philip's Southern Farmer.

Memphis, Tenn.

ONLY two dollars per annum for a Journal devoted to agriculture, horticulture, bees, stock and poultry. The acknowledged peer of any monthly in the South. Send your address and get a specimen. ADVERTISE your stock and poultry in the Farmer.
Address as above. 11t2x

GLASS HONEY JARS.

1 ℔ Round Jars per gross	$5.50
2 " " " " "	7.50
Corks " "	75c to 1.00
⅓ pt Honey Tumblers plain or ribbed per doz	.40
Six doz. in a box. Packages each	.40
½ pt Honey Tumblers plain or ribbed per doz	.50
Six doz. in a box. Packages each	.45
⅓ pt Honey Tumblers *Tin Top*, per doz	.65
Six doz. in a box. Packages	.45
½ pt Honey Tumblers Tin Top, per doz	.75
Six doz. in a box. Packages	.50

Also, Window Glass, Lamp Chimneys, and Glassware of all kinds. For sale by B. L. FAHNESTOCK. Late B. L. Fahnestock, Fortune & Co. Glass manufacturers, 76 Wood St. Pittsburgh, Pa. 9d

FOR 50 CENTS we will send **The National Agriculturist,** a large, live, 16-page illustrated family paper, six months on trial, or with large first class chromo *Flowers of Paradise,* 15½x21 inches, for $1.00, and extend the time six months free to agents sending subscribers, besides large cash commission or premiums. **The Bee-Keepers' Magazine,** same terms. Terms to Agents sent free. Address **H. A. KING & CO., 75 Barclay Street, New York.**

NEWSPAPERS Through our Club Cheap.
NEWSPAPERS We furnish all Magazines.
Leslie's papers, regular price $4, our price $3.40. All other papers equally cheap, some cheaper.
BOOKS All kinds, to members of our club at
BOOKS 1-5 less than retail price.
Address for CLUB LIST and BOOK circular:
E. KRETCHMER & Co. Coburg, Montg'y Co. Iowa.

TWENTY Colonies Italian Bees at $8.00 per colony if taken before 15th of Dec.. (too cold to ship after that). Strong in bees—heavy in honey—straight combs—"Dollar Queens"—delivered at shipping office this place.
11t12 H. NESBIT, Cynthiana, Harrison Co., Ky.

TERMS: STRICTLY CASH IN ADVANCE.

One Copy One Year 75 Cents, or with Lithograph of Apiary, size 12x16, Mailed Free, Postpaid, $1.00, or Lithograph will be sent as a Premium for Two Subscribers at 75 cents each.

Any person obtaining Three Subscribers at 75 Cents each, may retain 25 Cents for their trouble.
" " Five " " " 75 " "
" " Ten " " " " 2.50 " "

Any number above Ten will be sent at the rate of Fifty Cents each.

Names may be sent at any time during the year, and whenever a club is reached, we will credit back the amount previously sent us in excess of the Club Rates. In this way any of the

Articles Mentioned on our PRICE LIST may be Secured as PREMIUMS.

Please mention when names are intended for Clubs. An acknowledgment will be sent in all cases on receipt of money—for any purpose whatever—by return mail. Volume 1, for 1873 may be counted on the same terms, as we have a

Large Supply of BACK NUMBERS Provided for new Beginners!

As we cannot take the space in future numbers to go over the same ground again, and Volume One contains the entire Fundamental Principles and

Ground Work for Starting an Apiary.

GLEANINGS IN BEE CULTURE.

DEVOTED EXCLUSIVELY TO BEES AND HONEY

Supplement to APRIL No. 1875; and Eighth Edition Circular and Price List.

OUR MEDLEY.

THE BEE-KEEPERS OF OUR COUNTRY.

DEAR FELLOW BEE-KEEPERS:—It is now the 9th of March, and though winter still lingers, the sun has to-day thawed the ice off the walks sufficiently to allow Blue Eyes to take extensive promenades, of such a nature, that she fairly bubbled over at supper time with accounts to her papa of the wonderful things she had seen "out doors-es." The bees have rather stopped dying in the forcing house and are now starting brood very fairly, in proportion to their diminutive numbers, left to gather meal and care in other ways for the well being of their little ones. The rest of our Apiary seem to have wintered splendidly; GLEANINGS is receiving daily accessions to its circle of friends, although it has already a far larger number than at any time last year, and the world in general presents such an unwonted cheerful aspect that we really *cannot*, get at the matter in hand, until we tell you all how fervently we thank God for his many *many* blessings of which we are so little deserving. Prominent among them is the pleasant news coming from one after another of our old friends to let us know they are rejoicing to find that we *too* have *finally* "found that peace that passeth understanding."

Do you wonder that we rejoice to find we have so many ministers among our subscribers, that we feel as if we MUST take them all by the hand and wish them God speed in their noble work of reforming mankind? And this reminds us that we hope we shall have the approval of all of you in deciding to mention Mr. Langstroth, first of all the Bee-Keepers of America.

REV. L. L. LANGSTROTH, of Oxford, Butler Co., Ohio, most of you know, is generally accorded the honor of having first made the movable comb bee hive practically a success, and of having introduced it extensively among the people. How far he has been remembered, and what are his present circumstances may be gathered from the following extracts from a letter just received from him. It was not intended for publication, yet it answers so many inquiries in regard to him that we feel sure he will excuse it.

Excuse dear friends, the delay in replying to your kind inquiries. Since the last of June 1873, I have been laid aside from business of all kinds, and only in a few instances have I been able personally to respond to letters addressed to me. This week for the first time, have I felt any very hopeful symptoms of restored mental activity. A year ago last fall I was compelled by poverty and sickness to part with all my bees, and it is only within a few days that I cared to hear again the hum of an insect in which I once took such delight. Two years ago I was straining every nerve to have the suit of Otis against King brought to an issue. That eminent counsellor S. S. Fisher, after seeing all that the defense could say for their case, was confident that the claims of my patent would not be invalidated. The day was set for the hearing; but before the cross examination on my own sworn statement could be completed I was prostrated in mind and body by my old complaint, and every thing came to a stand. Since then Col. Fisher has died; and Mr. Otis, after being some time an inmate of an insane asylum, died there, and of course the suit came to an end. My relatives knew, and Mr. H. A. King was also informed by me, personally, that in aiding Mr. Otis, I had ceased to expect any pecuniary benefit by appealing to law (in case of a favorable verdict) to maintain my own rights against infringers. My settled and declared intention, was in the large territory which I then owned, to leave all infringers to act as their own consciences might dictate, in paying me a license fee or not, even although the law allowed me seven years after the expiration of the patent, to collect damages against them. I have felt for years that from the many conflicting, and as I believe, infringing hives, which have come into use, my relations to the bee-keeping community, had become misunderstood by many who were ignorant of the facts. I have unceasingly grieved to find myself in my old age, in such unpleasant antagonism to many with whom I sought to maintain only friendly relations. I have never derived even a meagre support from my patent, independent of the employment, and am now, since I have been laid aside from all business, almost entirely dependent upon the kindness of relatives.

Should I regain sufficient health, I should delight to revise my work on the Honey Bee, and give it the benefit of the latest discoveries and improvements.

Just before I was taken sick, I had been planning to make you a visit and show you what I regarded as a decided advance in the way of constructing both hives and frames. I remember with great interest our very pleasant correspondence, and the expressions of kindness from Novice and family. I associate you with the dear wife who appreciated so deeply the interest which you and your kind physician took in my health. With the kindest regards to each member of your family, I remain as ever,

Very truly your friend, L. L. LANGSTROTH.

Oxford, O. Feb. 26th, 1875.

In giving the above we have several objects in view; one is to show those who are entertaining hopes of gain by selling rights, that even so valuable an improvement as the movable comb, only resulted in trouble and loss to almost all parties concerned. And worst of all, it made unkindness, and trouble, where all should have been friends and neighbors. Lastly, it shows those who feel as if they owe a debt that has not been paid, just how they can recompense our kind old friend for his services.

Money may be sent us, and we will give a printed receipt for it in GLEANINGS each month. If Mr. L's health permits, we shall also expect brief communications from him for GLEANINGS. Fellow Bee-Keepers can we not give our old benefactor a few bees to enable him to start anew? Who will give a colony? Those in box hives would be safest to ship and our friend would in all probability prefer to transfer them to his own hives. Come now, let us have a donation party, send in bees, Queens, empty comb etc., etc. As he will need some money to pay express charges on all those box hives you are going to send him, we will start the list with $25.00 for that purpose. You can send money to him or to us as is convenient, but drop us a card telling us what and how much you have sent, that we may give proper credit. A fair view may be gathered of Mr. L's candor and good sense from his concluding remarks on page 38, Vol. 2.

M. QUINBY, St. Johnsville, Montgomery Co., N. Y., although also, well on in years, is still, we are happy to say, strong and vigorous both in mind and body. As something from the pen of a person will many times give the readers a more vivid idea of their peculiar characteristics than many pages of description, we shall on account of want of space be obliged t content ourselves with simply indicating whe their writings may be found in GLEANING Mr. Q's communications may be found on pages 102, and 104, Vol. 2, and 14, and 27, Vol. 3.

All who have read Quinby's and Langstroth's books, and we hope most of our readers have, we think will agree with us, that these works were evidently written with a true spirit of benevolence toward their fellow beings, aside from any feeling of pecuniary gain that might result thereby. Our warmest thanks are due them both for teaching us our A, B, C's in the science. Although these two pioneers struck out alone, and each without any knowledge of the other, we think it much to the credit of both that they agreed so nearly. The works that have since been compiled although deserving of merit for having condensed much of the matter, are yet so evidently dependent on these two, that we cannot think the writers deserving of a place by their side.

At present, we have three large honey producers in our Country who seem to deserve mention rather in advance of the rest.

J. S. HARBISON, of San Diego, California, the man who has shown himself capable of managing something like 2000 colonies, and who has produced from them in one season about 75 tons of honey, writes as follows in answer to a request for his Photo. Although his reply contains much sound sense and wisdom, we must think that we did not succeed in making him understand that our Medley is only a friendly grouping of those whose labors seem to give them a peculiar sympathy for each other. We are very sorry, but we suppose we shall have to content ourselves with his letter in lieu of the Photo.

Your favor came duly to hand, forwarded to my Mountain retreat. To give to the public at this early period, the results of my successful management in Bee culture, would not be consistent either with my self interest, havivg expended so much time and money in arriving at the results etc., nor justice to the several young men who are serving an apprenticeship under me, and who are surely entitled to more consideration than the public who contribute nothing to develope the business. To train young men to my method is the only sure way to perpetuate the business and rescue it from the dishonor and odium that has been brought on it in years gone by, by speculators, as well as by some who claim a place *as Apiarians.* This country is different from any other and I find myself yet much at a loss to understand the seasons, as each varies from the preceding. One or two years of my personal attention will do much to reduce the business to shape and establish precedents for future reference. I have no photograph suitable to send you, besides my reputation as an Apiarian needs more years to establish before being introduced to extensive public notice. Accept my thanks for your consideration and suggestions as to GLEANINGS as a medium to answer inquiries etc. I will avail myself of your offer at an early day. J. S. HARBISON.
San Diego, California. Feb. 11th, '75.

CAPT. J. E. HETHERINGTON, Cherry Valley, N. Y., seems to come next. See his report on page 7, Vol. 3. Now right here comes a point that we cannot illustrate better than by making a little extract from a private letter. Will our *young* readers especially bear in mind that it is almost out of the question, no matter how good natured they may feel, for such men as Harbison, Hetherington or Grimm, to answer all they receive. We cannot do it, even while we make it our especial business to answer inquiries. Many times the labor of answering an inquiry in full is as great as writing an article in full for an agricultural paper; in the former case, it is only used for one person, in the latter it may benefit thousands.

To make a report of this kind is a simple matter, while to take the consequences is quite serious. With my present notoriety I receive more letters than I can find time to answer, to say nothing of making a Hotel of ones house. When a man says "he has come 300 miles to learn *just how to manage* to get so much box honey" one cannot do otherwise than treat him just as well as he knows how. J. E. H. Dec. 31st, 1874.

Just exactly friend H., we must be neighborly, even if it involve making every subscriber on our list wait for their paper, while we are giving our attention to a *single* one of them. Cannot we make our *Journals* a *more* perfect medium, for making, and answering inquiries?

ADAM GRIMM, Jefferson, Wis., is another illustration that even advanced age need be no serious impediment to successful bee culture; see his reports on page 86, Vol. 1, and 127, Vol. 2. Friend Grimm has for years contributed, much, both in his writings in *A. B. J.*, and by importations of superior stock of Italians.

As we have got through with the five principal characters, shall we not now arrange ourselves simply, in alphabetical order?

MISS A., ("P. G") positively declines entrusting her biography to our voluble pen, in any shape or manner, so that we shall have to content ourselves with the valuable piece of information that Miss A., is P. G., and that P. G., is Miss A.

MR. & MRS. AXTELL, of Roseville, Warren Co., Ills. Page 21, 47, 82, 142, Vol. 2; 21, Vol. 3.

MARTIN H. ADAMS, Fort Ann, N. Y.

O. L. BALLARD, Malone, N. Y.

GEORGE BALL, Danbury, Conn., writes Feb. 11th, 1875:

Last spring I had 6 hives, made an extractor and sold over $100.00 worth of honey. Increased artificially and have now *thirty-one* on summer stands.

MISS SARAH BARKER, St. Johns, Mich. A friend of hers writes:

I recently purchased a few colonies of Italian bees for her with money she earned giving music lessons. She has started with a year's subscription to GLEAN-

INGS, and a copy of Langstroth's book, together with a good stock of patience and perseverence, hence I think she will succeed.

P. D. Bassford, Waterloo, Wis.

Frank Benton, Edgefield Junction, Tenn. P. 115, Vol. 2.

Robert Bickford, Seneca Falls, N. Y., is we believe, the original inventor of Quilts.

E. D. Billings, Elmira, N. Y.

E. C. Blakeslee, Medina, O., is the man who has the Railroad Apiary; See page 3, Vol. 1, and 75, Vol. 2.

James Bolin, West Lodi, Seneca Co., O. P. 10, 47, 55, 65, 95, 101, 104, 105, 109, 115, Vol. 2, and 25, Vol. 3.

Dr. F. Bond, West Salisbury, Vermont.

Dr. J. P. H. Brown, Augusta, Ga. P. 24, and cover to Sept. No., Vol. 2.

D. Lyons Browne, Indianapolis, Ind. P. 70, 93, Vol. 2.

Herbert A. Burch, South Haven, Mich., is well known as a writer in most of our Journals. P. 126, 144, Vol. 2; 14, Vol. 3.

J. Butler, Jackson, Mich. P. 9, Vol. 2.

M. H. Clement, Belleville, Mich. P. 119, Vol. 2, and 10, Vol. 3.

Eli Coble, Cornersville, Marshall Co., Tenn.

Prof. A. J. Cook, Lansing, Mich., has shown himself, by his writings and at Conventions, one of our clearest thinkers, and he don't go wild on hobbies. P. 23, Vol. 3.

J. H. Cook, Paulding, Jasper Co., Miss.

Franklin Coats, Columbus, Ind.

Mr. C's wife sends this Photo without his knowledge wishing it as a surprise to him. She also says they commenced last spring with 4 colonies, and have increased them to 9, and taken 300 lbs. of clover honey which mostly sold for 30c. She, as well as some other bee-keeper's wives write us excellent letters and then say we must not print them. Are we not excusable if we are a little disobedient now and then?

J. Crane, Bridgeport, Addison Co., Vt. P. 30, Vol. 1, and 70, Vol. 2.

C. P. Dadant, Hamilton, Hancock Co., Ills., and his father Chas. Dadant, bid fair to stand at the head of the Importing business. Some of Chas. Dadant's articles may be found on pages 29 and 50, Vol. 2.

J. L. Davis, Delhi, Ingham Co., Mich. P. 20, 23, 31, Vol. 1, and 9, 12, 51, 62, 107, 130, Vol. 2.

G. W. Dean, River Styx, Medina Co., O., like many of the rest of our friends has made himself master of one particular point. Friend D's specialty is being able to make his bees build all worker combs, and build them *strait*. His bees in fact, obey orders in general much better than some we have seen. P. 91, 92, Vol. 2.

W. J. Dederick, Borodino, Onon. Co., N. Y.

G. M. Doolittle & Wife, Borodino Onondaga Co., N. Y. We have many very good reasons for feeling that Mr. D. has not only been a friend, indeed, but he has proved himself also a friend in need. P. 63, 82, 89, 95, 123, 132, 135, Vol. 2 and 20, Vol. 3.

J. Donahoe, Newboro, Ontario, Canada.

I have kept bees the last 8 years, have at the present time 120 stocks, all in movable comb hives, and mostly Italians.

A. N. Draper, Upper Alton, Ills. P. 144, Vol. 2; 36, Vol. 3.

Andrew Dunlap, Champaign City, Ills.

P. H. Elwood, Starkville, Herkimer Co., N. Y. P. 55, Vol. 2; 7, Vol. 3.

John Elliott, Wadsworth, Medina Co., O.

B. Finch, Gallupville, Schoharie Co., N. Y. P. 47 and 71, Vol. 2.

E. Gallup, Orchard, Iowa.

"Gallup's" name has become almost a household word among bee-keepers, and we only regret that we do not hear from him of late as often as we once did. Open almost any where in the earlier volumes of the *A. B. J.*, and you may be sure of hearing either *from* or *of* him.

A. Grey, Reiley, Butler Co., O.

Katie Grimm, (now Mrs. H. Geiseler, of Green Bay, Wis.) will have to be considered the Heroine of the Extractor for some years to come we fear, as no other young Miss, (or Mrs. either for that matter) seems equal to the task she describes on page 53, of *A. B. J.*, for Sept., '71. Also see Gleanings page 7, Vol. 3.

Mrs. Lucinda Harrison, Peoria, Ills P. 116 Vol. 2. Mrs. H. deserves thanks for the lively articles she has furnished our Western papers.

H. Hudson, Douglas, Mich. P. 140, Vol. 2.

E. W. Hale, Wirt C. H., Va. P. 117, Vol. 2.

Dr. Hamlin, Edgefield Junction, Tenn.

Dr. H. before his decease, was one of the most extensive Apiarists in the South, and labored long and diligently in disseminating the Italians. At the time of his death, we believe he counted his colonies by the hundred.

F. H. Harkins. We have not his own Photo, but only that of his Apiary, when he was located at Home, Brown Co., Minn. See page 21, Vol. 2.

Mrs. Levi Hollingsworth, Monmouth, Ills.

E. Hunter, Manchester, Mich. P. 94, Vol. 2.

Dr. J. M. Jansco & Wife, Los Angeles, Cal.

In accordance with your invitation in Gleanings, I send you my wife's and my own Photo, as we are both bee-keepers, although novices. We start with 100 stands of bees, out of which one was killed while moving them over a rocky road, the rest are all very large colonies, some blacks, some hybrids, and the rest Italians. We learned the theoretical part of Apiculture and now we start in practice. The bees work on pollen *now*. I have been practicing medicine in town, but my health failed and I gave it up, and put up a bee ranche at the foot of the Sierra Madre Mountains, about fifteen miles from town in a fine place. We have a fine home and start an extensive orchard and vineyard in addition to our bees. We, I mean wife and self, are great bee enthusiasts; stings don't scare us, and we are in anticipation of a lively season. At the foot of our house we have over 500 acres white sage and much other bee feed.

We extend to you and your wife a hearty welcome, Dr. J., and shall look forward with much pleasure to receiving frequent reports from your mountain home. May we suggest to Mrs. J. that although her task may at times be laborious and fatiguing, we hope she will not be wearied in well doing. Remember that a nation of sisters are debating whether they are fitted for such duties, by their husband's, father's or brother's sides, and even *one* who gets discouraged and gives up may may exert a wide influence over the rest. Think of the great blessing of that robust health, that is only to be obtained by a life in the open air, among the hills flowers and trees, and remember what a great boon it will be to many, of your sex, if they once learn that they can thus be useful, and feel that their acquired skill and knowledge, places them, where they may not feel dependent on others, no matter what reverses may overtake them in life.

Lewis Kelley, Smyrnia, Ionia Co., Mich. P. 116, Vol. 2.

C. Kendig, Naperville, Ills.

W. M. Kellogg, Oneida, Knox Co., Ills. P. 141, Vol. 2.

D. N. Kern, Shimersville, Lehigh Co., Pa. P. 57, 60, 70, 72, and 84, Vol. 2; 9, and 23, Vol. 3.

Friend K. seems to be the original inventor, and for that matter the sole advocate at present, of cloth curtains for keeping the bees from the sun, and keeping off cold winds. The facility and quietness with which curtains can be moved, it seems to us places them before glass and shutters, that is if we really need to give the bees sunshine between the months of Nov. and March, a point on which we confess to be undecided.

E. Kretchmer, Coburg, Montgomery Co., Ia.

> As a matter of historical record, I may state, that I have owned Italian bees longer than any person in America. Being raised only 5 miles from the residence of Dzierzon, of Carlsmarkt, Silesia, I had the pleasure of seeing the first Italian bees ever brought to Germany in 1853. In the same year my father obtained a Queen from Dzierzon, and on the 14th of March, 1854, I received a swarm of *pure Italian bees* as a birth day present. For my first Queen in America I paid $150.00 gold, and in August 1861, [then in the U. S. Army] I sold my first *colony* of Italian bees for $150.00; quite a difference from present prices.

We have decided to give the above a place, yet it seems to us unaccountable that Italians should have been sold at such figures the same year that the *A. B. J.* was started. We find them advertised at that time on its pages at prices not so very much in advance of the present ones for full colonies. Was it not Confederate money friend K.?

Mr. & Mrs. D. P. Lane, Koshkonong, Rock Co., Wis. P. 9, 51, 94, and 143, Vol. 2; 34, Vol. 3.

C. T. Lane, Koshkonong, Rock Co., Wis.

P. Lattner, Lattners, Dubuque Co., Iowa, writes:

> In the spring of '74 I started with 24 colonies mostly weak, had plenty of empty combs [lost 110 colonies in the spring of 1873 with the dysentery] and took with extractor 3640 lbs. of honey. Sold all but about 150 lbs. at 20 to 25c. per lb. Increased to 49 and put 48 in winter quarters, for the first time, in a dry cellar. Examined them March 3rd, all right except one Queenless, brood in nearly all stages. My bees had not one inch of comb to build. Increased artificially, after the honey season was over. Enclosed find Photo for your Medley, if you think it won't "bust" it.

If the Medley won't stand a report from such a bee-keeper as you, friend L., it ought to be—Ahem. We fear our *veterans* are not equal to the task of 150 lbs. to the colony besides doubling the stock, even if they do have combs unlimited. Who can do better with 24 colonies?

E. Liston, Virgil City, Cedar Co., Mo.

P. Livingston, New Salem, Alb. Co., N. Y.

J. F. Love, Cornersville, Tenn.

W. S. Lunt, Fostoria, Hancock Co., O. Page 22, Vol. 3.

T. G. McGaw, Monmouth, Warren Co., Ills. Pages 99, and 120, Vol. 2.

> I now have 60 stocks, and 6 nuclei. I expect to winter and spring every one of these. I won't tell you now how much honey I expect to take from them.

A. McMains, Chariton, Lucas Co., Iowa. P. 60, and 96, Vol. 2. From the cheerful tone of friend M's letters we would not think of his being *deaf*, yet the intense questioning look so common in such cases is clearly seen in the Photo. He writes:

> I have not heard a word since I was about 15 years old and I am now near 34, but I can talk well. It will be a great pleasure to look upon the faces of the many whose interesting articles we have been reading so long.

Rev. J. Meador, Dover, N. H.

Dr. C. C. Miller, Chicago, Ills. Pages 9, 56, 57, and 140, Vol. 2, and 52, Vol. 3.

N. C. Mitchell, Indianapolis, Cincinnati, Columbia, Tenn., and finally Defiance, O., when last heard from. Friend M. *teaches school* for the benefit of those benighted in the science of bee culture, and also for the purpose of getting $30.00 for one lesson occupying less than two hours. He also keeps very valuable receipts for sale telling things that can never be found in any Journal. You pay him the money (from 5 to $50.00) and then learn that he by mistake left the precious papers at home but that they will be sent first mail etc., etc. Our readers may be astonished to learn that *he does* get large sums in this way, and even from neighborhoods where Gleanings circulates at that. See pages 80, Vol. 1; 20, 32, and 128 Vol. 2; 22, Vol. 3. We earnestly pray that Mr. M. may be led to see the error of his ways, and become a useful member of our branch of industry. He is smart and talented and could easily make a handsome income by raising honey and bees *honestly*, instead of prowling about the country as he does.

G. C. Miller, Mt. Hanley, Nova Scotia. Page 106, and 143, Vol. 2.

J. P. Moore, Binghampton, N. Y. P. 118, 130, and 143, Vol. 2.

W. P. Moore, M. D., Richland Station, Sumner Co., Tenn. Page 110. Vol. 2.

J. E. Moore, Rochester, Beaver Co., Pa.

Theo. Moltz, West Fairview, Pa. Pages 80, 103, Vol. 2.

P. Mohler, Oneida, Knox Co., Ills.

Chas. F. Muth, Cincinnati, O. Pages 10, 22, 33, 139, Vol. 2; 19, Vol. 3.

Samuel Mumma, Highspire, Dauphin Co., Pa. Page 102, Vol. 2.

A. J. Murray, Memphis, Tenn., is widely known as a writer on Apiculture. He says:

> From experience during the war, [I was a "Johnny Reb"] I found the bee-keepers ignorant. I was raised among bees in Europe, and loved them, and as soon as I had a home of my own, I began to study them again closely, and I have given my experience and advice for the past 5 years, through the columns of the *Southern Farmer*, *Southern Cultivator*, *Rural Alabamian*, *Our Home Journal*, and *Texas Farmer*, besides other papers that have lived and died some time ago. By this means I have awakened an interest in bee-keeping that was never known before, and the interest continues to increase.

James Markle, New Salem, Alb. Co., N. Y.

J. H. Martin, ("Scientific") Hartford, N. Y. P. 116, Vol. 2. Scientific is pretty well known as a faithful and disinterested writer, in *A. B. J.* particularly.

S. D. McClean, Culleoka, Maury Co., Tenn.

> By your rule of judging a bee-keeper by the tons of honey he sells, you won't know where to locate me, as I have never made a report of my success, but will try and be content with the position assigned me.

J. McElrath, Asbury, N. J.

Native Australian.

We should like very much to be able to state *positively* that this individual is a bee-keeper but to confess the truth the picture was only sent us by our subscriber in Australia, (page 124, Vol. 2), and he neither said he *was* or *was not* a bee-keeper, but we give him the benefit of the former supposition. It strikes us that bee veils, with extensive "coat tails" to 'em might be in brisk demand in a country where such simplicity (?) of dress is in vogue.

J. H. Nellis, Canajoharie, Montgomery Co., N. Y. Page 32, Vol. 3.

NOVICE AND BLUE EYES.

But what has Blue Eyes to do with Bee Culture, some may ask? Well, not much as yet, but as it so happened, that she first opened those blue orbs, to the light of this world, on the very *day*, that GLEANINGS Vol. 1, *No. one*, came from the printing office, she became associated, and grew with GLEANINGS, in the affections of her papa. Accordingly at a very early day, she visited the bees with him, and shared his pleasures and enthusiasm. Up to this date she has, strangely, never been stung. Should it please God to permit her to talk to you all on these pages, at some future time, as does her papa now, that day will indeed be a happy one to both her parents. Mrs. N., has been deterred from taking a very active part in the duties of the Apiary, principally by the very severe, and almost alarming effect of a single sting. She is promising now however, to make an attempt to become inured to the poison, a point on which, although her faith is very faint, Novice's, is unbounded.

H. NESBIT, Cynthiana, Ky. A valued friend who has been through the "ups and downs" of the business, but who we think is getting to be a pretty cool and steady hand of late.

MISS IDA F. NOYES, Detroit, Mich. A friend furnishes the following:

Several years ago she obtained a colony of bees in a box hive. I transferred it for her. The number of colonies was increased the first season to three or four; then came a severe winter and all of them died. This of course, was discouraging to a beginner, and, to say the least, her opinion of bee culture was at "low tide." She then changed her location for the purpose of attending high school, and the subject of bees was dropped for a time. Happening however to read a bee item of mine, her interest was re-awakened, and, though for a long time she kept very still on the subject, she says "I very soon became so interested in Apiculture that I read anything and everything I could find relating to the subject, and at last have come to the conclusion that bee-keeping is the very best kind of business to follow, and since it allows much leisure during the winter months, one can devote considerable attention to general literary culture."

She now has an interest in a modest little Apiary and is succeeding finely.

OUR FRIEND CHARLIE, is not a bee-keeper either, but he comes very near it, for he carries the frames, hives, extractors, honey etc., etc., to the station, and brings the tin, lumber, sugar etc., besides the paper, type and all the materials for printing the "Bee Cultivator" as he terms it. Charlie has *seen bees* a few times but he has never got hurt and we consider him almost one of us.

D. D. PALMER, Eliza, Mercer Co., Ills., has written some pleasant articles entitled "Chips etc." He is familiarly known through the Journals. He writes us March 1st.

Lost all my bees two years ago; last winter lost 60 out of 95, the 35 left I increased to 100 and got 3000 lbs. slung honey and 600 lbs. box honey, 3600 lbs. in all, bees are in cellar, no sign of disease.

GEO. PARRATT, Winamac, Pulaski Co., Ind. Page 9, Vol. 2.

MELVIN PARSE, Pine Bluff, Ark.

T. PIERSON, Ghent, Summit Co., O. Page 22 and 58, Vol. 2.

Wm. PAYNE, Spencer, Medina Co., O. Page 92, and 118, Vol. 2.

E. S. POPE, Indianapolis, Ind.

A. J. POPE, Indianapolis, Ind. P. 144, Vol. 2.

M. L. RAUB, Bolivar, Alley Co., N. Y.

MRS. M. L. RAUB, Bolivar, Alley Co., N. Y.

J. T. ROSE, Petersburg, Monroe Co., Mich.

MR. & MRS. M. RICHARDSON, Port Colborne, Welland Co., Canada. Page 120, Vol. 2.

L. C. ROOT, Mohawk, Herkimer Co., N. Y. Page 27, Vol. 3.

S. ROWELL, Faribault, Rice Co., Minn. Page 9, and 105, Vol. 2.

MRS. S. ROWELL, Faribault, Rice Co., Minn., is the woman that is going to get an Organ with the proceeds of a single hive, (page 13, Vol. 3), and she will get it too, or we are no judge of "*wo*-man nature."

CHAS. H. RUE, Manalapan, N. J. P. 108, Vol. 2.

W. H. SEDGWICK, Granville, O.

I don't feel as though I was one of you yet, until I can say I have had 100 lbs. surplus from a hive. I enclose a Photo of my "precious self;" Mrs. S. thinks that will be the best looking man in your collection.

Mrs. S. is quite right; we hope every woman, aye, and every man too, feels a preference for the fellow being whose happiness God has so intimately interwoven with their own.

E. A. SHELDON, Independence, Buchanan Co., Iowa. Pages 57, 96, and 131, Vol. 2.

MRS. E. A. SHELDON, Independence, Buchanan Co., Iowa.

W. F. STANDEFER, Dry Grove, Hinds Co., Miss.

MRS. W. F. STANDEFER AND SON, Dry Grove, Hinds Co., Mississippi.

I send you Photo of my wife who helps me with bees when she is able [being consumptive] and my oldest child Sylvester, who attends my Queen nursery, and either sets to rights any irregularity in Apiary or reports to us; shows visitors around in my absence, opens hives, exhibits Queens, explains the use of extractors, smokers, cages, etc. Many are as much astonished at the child, as the Apiary; he is 8 years old, began working with bees at 7 and is now running 2 colonies on his own account.

A. M. STEED, Front Royal, Warren Co., Va. Page 124, Vol. 2, and 23, Vol. 3.

SPENCER STRONG, Akron, Fulton Co., Ind.

J. M. C. TAYLOR, Lewiston, Maryland.

Wm. TROYER, Annawan, Henry Co., Ills.

I like bees. Was the first to introduce Bee Journals, Frame hives, Italian Bees and Extractors in this township. At one time I had 110 swarms, but the winter of 1871-2 nearly cleaned me out.

MRS. ELLEN S. TUPPER, Des Moines, Iowa, has by her labors through the medium of different periodicals, and at associations and colleges made herself widely known and gained a great number of friends. Her life has been, and probably will be one full of active work, many times it seems more laborious and full of business cares than one of her sex ought to bear. Her health of late has been poor and we trust her friends *en masse* would be glad to see her take more rest, and enjoy her bees more in peace and quietness, undisturbed by busy traffic.

Her daughter, MISS KATE N. TUPPER, a graduate of the Iowa Ag. College, is now studying Medicine. May her life be as useful and yet unclouded with the many cares that have at times devolved on her mother.

REV. J. VAN EATON, York, Livingston Co., N. Y., although a minister seems always running over with fun as may be seen from the sketch from his pen on page 28, Vol. 3, and the following which accompanied the Photo.

On the opposite page is the last development in *that* line of Darwin's system of evolution. It is all I have. I use them as posters on marriage certificates. It must be at safe distance from Grimm and Gallup and all the aristocracy of the great bee-dom—perhaps you'd better slip it round on t'other side. If I only could whisper to P. G., that same picture might stand a nice chance for display.

W. S. Ward, Fuller's Station, N. Y.

Geo. T. Wheeler & Wife, Mexico, N. Y. P. 29, 140, Vol. 2.

R. Wilkin & Wife, Oscaloosa, Iowa. Friend W. too, has seen the "ups and downs," especially the latter, but we hope to hear he is improving of late. P. 24, 33, 82, 93, 96, 103, 106.

J. Winfield, Hubbard, O.

W. D. Wright, Knowersville, Alb. Co., N. Y. P. 50, Vol. 2.

The following names were omitted by mistake, or were sent in after the above were in type.

Miss Annie C. Mann, Yarmouth Centre, Ont., Canada.

I began with 2 swarms and have in four seasons worked up to 28. I am strictly a "novice" at the business, and the worst is, the more experience I have the less I seem to understand it. "That bee disease" has not been in my Apiary. I winter out of doors on their stands. I use the Thomas hives, double and single. Prefer the single for wintering. I bought an extractor lately, and am going to try to use it next summer. I wish I could see some one else use it first. I am so pleased that "P. G." is a lady. I do not know of one lady in Canada who keeps bees, tho' there may be.

A. A. Rice, Seville, Medina Co., O.

Mr. R. has been in the business but few years, but if our veterans could make every thing succeed as he does, they ought to be happy. His Alsike Clover gives him barrels of honey and bushels of nice seed, his Long Idea hives, work to a charm, he winters without loss, and we really begin to suspect that that pleasant wife of his, (Mrs. A. A. Rice,) has something to do with it all.

George Stray, Girard, Branch Co., Mich.

Mrs. D. N. Kern. Her husband sends the following:

My wife said she thought it was not quite fair, that she thought she did take as much interest in the "curtain arrangement Apiary" as I, and so I send both.

Quite right friend K., we certainly wish to give the ladies every possible encouragement.

Another "Blue Eyes," daughter of W. H. Sedgwick, Granville, O. He writes:

I think I never opened a hive last summer that she was not right at my side, in the way.

"Ouch!" is taken from a Chromo published by J. F. Ryder, 239 Superior St., Cleveland, O. It tells its own story.

In conclusion dear friends, allow us to say that we are aware of having picked up these brief sketches, in a very hap-hazard way. The thought only recently occurred to us, and amid a crowd of business we have picked up whatever happened to lay conveniently. If we have omitted now and then to say a word in regard to some of our best friends, excuse it on the ground that nothing lay convenient to hand. Besides a lot that we wanted to say, and had written, was clipped off for want of room.

TABLE OF PREMIUMS.

Our reasons for deciding to offer Presents are as follows: Many names are sent us out of pure good will, saying they think it a pleasure to assist and don't want recompense. Now it is some trouble to write a letter, pay postage, get a money order etc., and we prefer to pay every one for such service; yet you know we cannot send you 5 or 10c. by mail *as pay*. But we can send something to your little girl or boy that will cost but little, and yet may please *them* more than a "whole dollar." We have been for years in the Jewelry business and hope our taste and ability to select useful, pleasing and instructive presents may prove happily directed. You can count all subscriptions sent during the year, and back volumes, the same as the present one; as for instance, if two of you send for Vols. 1, 2 and 3 each, it will make a club of 6, and will entitle you to any of the $1.00 articles, providing you pay 75c. for each Vol. Where no premium is wanted we send all three Vol's for $2.00 including Lithograph. Designate by number what premium is wanted; if you leave it to us, we may send you something you have already. Only those who have made out ten names, are entitled to send them at 50c. each. Otherwise, we shall only send it for 8 months.

TABLE of Premiums and Terms.

No Exceptions—No Competition.

Open to all.

No.	*Names of Premium Articles.* *Any of them sent free on rec't of price.*	*Prices of Premiums*	*Number of Subscribers required at* 50c.	*or at* 75c.
1	*Lithograph of Apiary, Implements etc,*	30	10	2
2	*"That Present." (Explains itself)*	.30	10	2
3	*Small Horseshoe Magnet, a scientific toy*	30	10	2
4	*A Finger Ring of Coin Silver, our own make*	.30	10	2
5	*Emerson's Binder for* GLEANINGS, *will hold 4 Volumes*	.50	20	3
6	" " *better quality*	.60	25	4
7	*Pocket Magnifying Glass*	.60	25	4
8	*Any Volume of* GLEANINGS	.75	30	5
9	*Best Quality Emerson's Binder for* GLEANINGS	.75	30	5
10	*Pair of Gold plated Sleeve buttons, small size but durably plated*	.75	30	5
11	*Coin Silver Watch Chain, plain and very light*	$1.00	35	6
12	*Double Lens Magnifier, on 3 brass feet*	1.00	35	6
13	*Photo Medley of America Bee-Keepers*	1.00	35	6
14	*Pen and case, Morton's Make, pen gold, case plated*	1.00	35	6 6
15	*Gold tooth pick, in plated case*	1.00	35	6
16	*Plain Gold Ring, our own make, light, but full 18 K fine*	1.50	40	7
17	*Any two back Volumes of* GLEANINGS	1.50	40	7
18	*Case of Drawing Instruments*	1.75	50	8
19	*A real Compound Microscope, beautifully finished, and packed with Imple- in a Mahogany box*	3.50	100	10
20	*An Achromatic Telescope, finished like above*	3.50	100	10
21	*A coin silver Watch Chain, two strand, with Slide and tips, our own make*	3.50	100	10

Index to Vol. 2—GLEANINGS.

Apiary, How to Conduct.......3, 15, 27, 37, 49, 61, 73, 85, 97, 109, 121, 133.
Apiary, Our Own..........11, 23, 30, 35, 40, 42, 52, 63, 77, 86, 98, 111, 123, 136.
Apiary, Capital needed to start on....................100
" Shall we allow Poultry in....................63
" Report from....................93
" A scene in the....................88
" Locating an....................81
" Photo's of....................21
Abbreviations in Bee correspondence....................40
Aster....................142
Adam Grimm, Report from....................127
Artificial Fertilization....................20, 144
" Swarming....................68
" Pasturage....................28
" Heat, for building up a colony in winter....5
Alsike Clover....................28
Bees, What is a hive of worth....................4
" Rye and Oats for....................42
" Giving them a "fly" in winter....................15
" Candy for....................18
" Wings etc....................19
" Raising in a hot-bed....................27, 52, 53
" *Do not* make honey....................112
" And cider....................114, 135
" Can be kept in a city....................34
" In Texas....................69
" Killing their Queens, remedy for....................70
" How far will they go home....................81
" Moving in working season....................81
" Starch for....................69, 107
" Shipping South to winter....................119
" Water for....................74, 78, 120
" And things away over the water....................124
" Flying in confinement....................125, 126, 142
" Hot-bed for....................127
" Housing for winter....................136
" Flying under glass....................126, 139, 136, 138
" Moving for fall pasturage....................129
Bee Stings etc....................128
" Feed, cheap........a....................6
" Correspondence, Abbreviations....................40
" Houses....................133
" " Rustic....................17

Bee Houses, Painting floor etc.......17
“ Disease, Experiment on.......139
“ Journals.......11, 23, 42, 54
“ Keepers, Shall we have a dep't for box hive?...84
“ “ Of Shenandoah Valley.......124
“ “ Of Onondaga Co., N. Y.......140
“ Keeping in California.......135, 139
Brood Rearing.......122
“ And Pollen.......125
“ Or eggs for Queen rearing.......99
Blasted Hopes.......8, 32, 44, 55, 79
Box Honey.......132, 135
“ “ Last appeal for.......104
Buzz saw for hive making.......31, 42
Both sides of the question.......52
Blue Thistle.......130
Basket for carrying the combs.......52, 63
Catnip, Cultivation of.......33, 110
“ Honey.......130
Conventions.......7, Oct. cover
Clipping Queen's wings.......7, 19, 32
Combs and honey from diseased colonies.......66
Comb building.......91, 96, 140
Colonies, How to make.......98
“ Uniting.......121
“ Strong.......41
“ How to winter 100.......54
Comb guides, Receipt for making.......11
Candied honey, melting.......33
Combs, Shall we build or buy them.......44, 116
Changing Two story to Horizontal hives.......43, 50
Clover seed.......102
“ And Italians.......102
Cider, deleterious to bees.......135
Cutting winter passages, Tool for.......140
Dry Sugar feeding.......18
Dadant's divisible Quinby frames.......29
“Dollar Queens”......23, April and June cover, 70, 132
“Dollar” Extractor.......66
Division boards.......74, 123, 143
Does an Extractor pay.......79
Door steps for hives.......83
Double width two-story hives.......104
Davis' Transposition process.......107
Disadvantage of two-story hives.......117
Doolittle's Report.......123, 135, 138
Exchanges.......2
Editorial......6, 18, 30, 42, 54, 66, 78, 90, 102, 114, 126, 138
Eggs by mail.......10, 71, 90, 95, 96
Extracting.......60
“ Tent for.......142
Extractor for $1.00.......66
“ Does it pay.......79
Extracted versus comb honey.......95
Entrance blocks.......71
“Elbow room” for the Queen.......79
Experiments with bees under glass.......136, 137, 138
“ In regard to the Bee disease.......139
FRAME, STANDARD, Can we agree on?.20, 28, 38, 50, 62
Frames, triangular.......70
Feeding.......28
“ Meal.......42
“ “ In fall.......140
“ In the open air.......58, 70
“ Dry sugar.......18
Feeders, Tea-Kettle.......72
“ Our Universal.......102, 142
Freezing out the moth miller.......96
Fertile workers.......120
Guilty or not guilty?.......16
Grape vines, Pruning the.......27
“ “ For shade.......76, 88
“ “ Trellis for.......76
Getting ready for winter.......90, 97
Great number of Queen cells.......98
Grand children of a pure Queen, never black...118, 119
Golden Rod and Aster.......142
Honey Column.......9, 24, 33, 43, 92, 103, 114, 127
Humbugs & Swindles.......8, 20, 32, 46, 80, 127
Heads of Grain 9, 21, 33, 47, 57, 69, 81, 93, 105, 117, 129, 141
Hives, Can we agree on a STANDARD?..23, 28, 38, 50, 62
“ Straw.......9, 102
“ About making good.......16
“ Single story versus two story......23, 29, 35, 38, 39, 50, 51, 101.
Hives, Tall for wintering.......29
“ Buzz Saw for making.......31, 42
“ Quinby's Non-swarming.......36, 42
“ Changing two story to horizontal.......43
“ Cheap paint for.......53
“ How large shall we make them?.......29, 138
“ Question.......110
“ Suspended.......74
Honey plants, Vetch.......10
“ Labels.......12
“ “Strained”.......24
Honey, about.......115
“ Fall.......134
“ Candied.......33
“ Wine and Brandy Casks for.......11
“ Care of after extracting.......115
“ Who buys and who sells.......92
“ To prevent candying.......102
“ The great crop from California.......139
House for meal feeding.......42
How to make a Wax Extractor.......44
“ “ “ Queen cage.......Cover of June No.
“ “ “ Straw mats.......69, 82
“ “ “ Colonies.......98
“ “ Winter 100 colonies without loss.......54
“ “ “Spring” 100 “ “ “ 65
“ “ Get the bees off the combs.......94
“ “ Sell nice wax.......94
“ “ Advertise honey.......114
How the moths nearly got the better of us.......77
How large shall we make our hives.......138
Hemp for pollen.......142
Housing bees for winter.......136
Italians and Red clover.......102
Imported Queens, color.......106
Implements, Devices and Suggestions.......140
Introducing Queens.......118
Introduction of Virgin Queens.......43
King Bird found guilty.......110
Luck in wintering.......105
Manure on the Brain.......56
“Novice” Queens.......70
“ Letters to.......101
Primary Department.......76, 88, 100, 113, 122
Pasturage, early.......93
Problems.......5, 52, 63, cover to July No., 143
“ Concerning.......22, 28, 34, 44
“ Answers to.......89
Poultry, a short chapter on.......45
Pollen.......53
“ A timely word in regard to.......72
“ Can it be wintered out of the hive?.......89
“ Why is it lacking?.......93
“ Its relation to brood-rearing.......116
“ And brood.......125
“ Want of in winter.......141
Quilts.......11, 23, 75
“ Old carpet for.......130
“ And propolis.......11, 23
Queen Rearing.......67
“ Cells, great number of.......98
“ “ Why do bees gnaw them down?.....129
Queens $1.00.......12, 24, 36, Cover to April No., 54
“ Losing.......118
“ Are the $1.00 inferior?.......132
“ Losing while extracting.......132
“ Who will rear them in the South?.......24, 36
“ “ “ “ Cover April, May, June Nos.
“ Virgin introduction of.......43
“ Cages.......54, 56
“ Shall they be reared from the egg?.......89
“ By mail.......90
Roll of Honor.......59, Cover of June No.
Robbing, A piece about.......57
Receipts, selling.......5
“ For making comb guides.......11
Reports Encouraging.......9, 32, 46, 51, 140
Straw mats.......69, 82
Strait combs.......140
Shipping bees South to winter.......119
Smokers, All about.......68
Swarming out in spring.......53, 141
“ A grape vine.......113
Sugar syrup versus honey for wintering.......55
Smothering new swarms.......94
Temperature.......18
“ For Queen cells.......119
Tent for extracting.......142
Transferring.......100
To prevent honey candying.......102
Universal Feeder.......102, 142
Unsealed stores.......120, 139
Uniting colonies.......121
Vetch as a honey plant.......10
Value of little attentions.......81
Ventilating cellars.......109
Water for bees.......74
Wintering.......10, 15, 35, 41, 54
“ Out-door, remarks in regard to.......139
“ “ In Long hives.......101, 120
What I have done.......74
Wire cloth division boards.......74
Wormwood for smoking bees.......68, 143
Waxing barrels.......86
Wax, nice, how to sell.......94
What to do with the sugar syrup in spring.......108
Why do hives smell sour?.......129, 139

Implements for the Apiary.

In presenting this list, we would remark that we have carefully thrown out or remodeled every thing found in any way defective, and we offer nothing that we do not approve of and use in Our Own Apiary.

We can ship promptly, by Freight, Express or Mail, (none mailable except those designated) goods mentioned in the following list. Hives, Extractors, etc., can be sent much cheaper by freight, but in this case they should be ordered three or four weeks before needed, if the distance is considerable. During the months of April, May and June, orders may sometimes be delayed several days, but our customers may rely upon receiving notice at once on receipt of all remittances.

At the prices given below, cash *must accompany every order;* as the sending of goods C. O. D. entails an additional expense, and goods many times fail to be taken, we must be excused for refusing to send any that way. When hives or frames are ordered in quantities, the additional expense of boxing is such that we can make no better rates on large orders. Orders for frames or hives of dimensions differing from those named, will also be liable to some additional delay, especially during the "Honey months."

PRICE LIST.

As much diversity of opinion still exists regarding hives, so far as size and shape are concerned, we shall still furnish the five different shapes of "Dollar Hives," as described in our circular for 1874, which will still be mailed on application.

To those who ask our opinion, we would state that, as yet, we have no sufficient reason for preferring any thing to what we have called the Standard. Prices as follows:

In order to hasten the introduction of the

☞STANDARD☜

Apiarian Implements, we make the following offer.

Standard Hive, including bottom-board, door-step, blocks, and all the stand that we think is needed to keep it from the ground	$2.00
Twenty frames for above 5¾c. each	1.15
Sample Frame, by mail	12
Quilt	40
Or all complete except painting, for	3.50
The same in a bundle including nails, hinges, etc,	3.25
Extractor made expressly for Standard frames, (holds frame 13¾ wide, by 11¼ deep)	$9.00

Any deviation from above, be it only 1-16 of an inch, will be only at our regular list prices.

Frames of any desired dimensions, with Metal Corners	06
Sample frame with section of metal rabbet, including sample of transferring clasps, (by mail)	15

To save the expense of shipping so great a bulk, frames will be packed ready to be put together, unless hives to contain them are to be sent made up, but the price will be the same in either case.

Metal Corners put up in packages of 100, *i. e.* enough for 25 frames, (by mail 20 cts. extra)	1.00
Per 1000	9.00
Per 10,000	80.00
Cast Iron Blocks for putting Metal Cornered frames together, (by mail 10 cts. extra)	15

With every order for 100 frames or more, one of the above will be included without charge.

Rabbets for frames to rest on, made of folded strips of metal, per running foot	02

Folding the strips adds greatly to the strength, besides furnishing a smooth, hard surface for the end of the frame to strike when replacing it, and preventing the bees gumming the projecting ends of the frames, as well as the supporting edge. In ordering, name *length* desired.

Quilts for any of the hives mentioned, (by mail 6 cts. extra)	25
The same double width	40
" triple width	60
Metal Clasps for transferring, package of 100, (by mail 10 cts. extra)	25

These are made to fit our frames or any other just ⅜ of an inch.

Novice's Honey Knife by mail	1.00
Half dozen, by express	5.00

We will add that our Honey Knives are sufficiently keen and sharp to uncap honey with facility, without resorting to water, either hot or cold. The handle is of Ebony, and the whole is very strong and finely finished.

Tinned iron hoops made expressly to go around top of can for Extractor, two sizes, 17 and 20 inch, each 50c., per doz	5.00
Tea-Kettle Bee-Feeders that will feed a colony under favorable circumstances 25 lbs., or sufficient for winter, in *ten hours*	1.00
Extractors for any of the frames mentioned	10.00

These machines are all of metal, and as the bearings are all of tempered steel, they are very light and easy running. The gearing has been recently, considerably improved, and every part is most especially arranged for rapid and easy work, while strength and durability have been duly considered. It may be as well to inform our feminine friends that the machine was not only much of it designed, but its construction has been constantly supervised by one of their own sex, who assists in the extracting department of our own Apiary. The entire weight of the machine is only about 16 lbs., and the entire inside work and gearing may be lifted out, leaving a stout tin can with a substantial bottom, and iron bound at the top, worth for a variety of purposes, nearly what the whole machine costs.

We can furnish a cheaper form, with flat bottom can, of cheap tin, for	6.00

There has been so little demand for these that we have not kept them on hand.

Gearing for Extractor, including all castings to fasten it to the can (by mail 40c. extra)	1.50

In ordering Extractors, castings, or inside work, give *outside* dimensions of frame or frames to be used in them.

With inside revolving frame and steel pivots, bearings, wire cloth, and all except the Can	5.00
Galvanized iron wire cloth, made expressly for Extractors, per square foot [by mail 5c. additional]	15
Fine tinned wire cloth for Queen cages, same price.	
Molasses Gates for Extractors (by mail 20c. extra)	50
Superior White Oak barrels for honey, hold 375 lbs.	2.50
The same waxed and painted	4.00
Spring Balances, a nice article	8.00

These Scales are made weather proof and when arranged to suspend a moderate sized colony, may be left out all summer; as the figures on the dial are plain and large we can see at a distance the average yield of honey per stock, each day or *hour* even; when weighing stocks for winter, they shorten the work very materially.

Scissors for clipping Queen's wings. These are small, fine steel and very fine pointed, by mail	40
Lithograph of Apiary, Implements etc., by mail	30
Alsike Clover seed, *the best*, less than 10 lbs., per lb.	35
" " " " over " "	30
" " " " by mail, postpaid "	50
Summer Rape seed, per lb., by mail, in cloth bag	35
" " " " by express	15
Queen Register Cards, [for description and illustration see cover of June No., Vol. 2.] per doz	10
Lamp Nursery for hatching Queen cells	5.00

This is a double hive made of tin, with a space beneath the walls to hold water. A lamp keeps the water at any desired temperature at an expense of about *one* cent per day. Without a doubt, the machine would hatch eggs, (*perhaps* it would also scratch food for the chickens) we haven't yet tried it, but it hatches every thing in the "bee line" quite satisfactorily. See description in Vol. 1, page 74. In ordering give accurately length of top bar to frame.

Queen Cages, [see cover to June No.] each by mail	12
Galvanized tacks, just the thing for the Apiary, (by mail 2c. extra)	10
Thermometers (by mail 3c. extra)	40
Universal Feeder (by mail 3c. extra)	10

We believe, and hope this inexpensive arrangement may prove fully adequate, for all purposes. For description, see page 102, Vol. 2.

Medley of Photo's of Bee-keepers, size 8 by 10	1.00
Bee Veils, (see cover to May No. Vol. 2, and page 2, Vol. 1), by mail	75
Wax Extractor, for description see April No. of Vol. 2	3.50
Honey Labels, with name and address, per 1000	3.00

By mail 25c. per M. extra. Samples free.

Small Larvæ for Queen rearing, by mail	25

These can only succeed in warm weather, say June, July, Aug. and Sept. The piece of comb containing them will be safely packed in a wooden box.

We always consider it an especial favor to have customers inform us by postal card whether goods are satisfactory; whether our mode of packing is efficient; time taken in transit; whether Express or Freight charges were reasonable, etc., etc.

Respectfully, A. I. Root & Co.